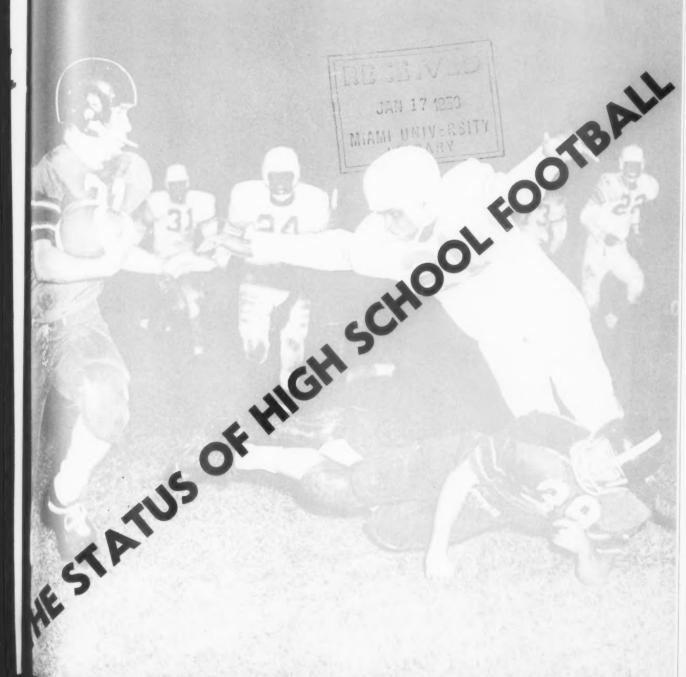
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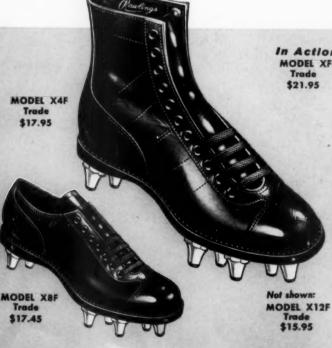


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January, 1958

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FRONT COVER ILLUSTRATION

To set the scene for our report on high school football, we used a picture taken at the Lawrence, Kansas—Kapaun (Wichita) game this past season. John Hadl, all-state halfback is sweeping wide on an option off the outside linebacker. Lawrence won the state championship for the second successive season, and this school has now won its conference 14 times out of the last 15 years.

A Look At This Issue and a Glance Ahead

A multiple offense would best sum up this issue. For the football coach, there is our nation-wide survey on the status of high school football in addition to an article on the filming of games. For the track coach there are six articles headed by our Twelfth Annual Report on High School Track. Baseball is represented by two fine technical articles, and for the wrestling coach there is the second part of Al Hurley's illustrated article. A swimming article, an article on facilities, and an article on administration complete the line-up. Incidentally, notice how

timely Charles Avedisian's article is in view of the findings of our study on high school football. For our feature next month we dipped into the deep South and have, we think, a most informative illustrated article on pitching. Also in this issue will be our third "For Your Bulletin Board" feature of the current series. This one will be on the high jump. For the benefit of the coaches in the East, the track coaches, baseball coaches, and football coaches associations are having their meetings in Philadelphia. Attend if you can—the clinics are outstanding.

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or cross country
shoe by Spot-Bilt



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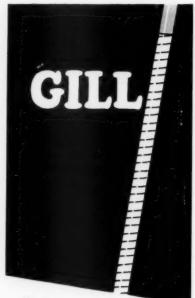
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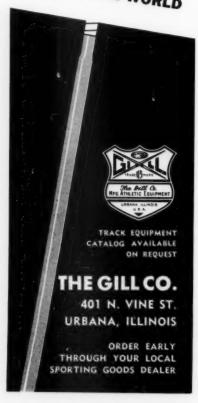
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from here and there

WHENEVER we hear a basket-ball coach bemoaning the fact that he does not have the "big man," we are reminded of the plight of Bob Spear, coach of the Air Force Academy team. The maximum height permissible for admission to the academy is 6 feet, 4 inches. A glance at a few representative rosters shows how relatively small 6 feet, 4 inches is in college basketball. The numeral indicates the number of players 6 feet, 4 inches or over: Arizona (7), North Carolina (9), Clemson (6), Indiana (8), Miami, Florida (6), Louisville (8), Syracuse (9), San Jose (8), Cincinnati (7), Dayton (7), Duke (9), Missouri (7), and Michigan State (7)... John Marzucco, who invented the popular aluminum spill-proof hurdles, was the high school coach of George Hearn, the new national interscholastic high hurdles record holder . . . Dr. J. W. Wilce, former Ohio State football coach, recently concluded a survey for the American Medical Association in which he could find no basis for the idea of the so-called "athletic heart." ... Judging from Tulsa's opponents in both football and basketball, there is not an appreciable amount of difference between the coaching experience of the head football or the head basketball coach. The head football coach of Tulsa's ten football opponents graduated from college on the average in 1937, while the average year of graduation for the 13 basketball coaches opposing Tulsa this season was 1934 . . . A number of prominent coaches never participated in sports in their high school days. Rip Engle for one never played football until he enrolled at Western Maryland. Branch McCracken, who went to Indiana as an outstanding basketball player, had never seen a game of football until his freshman year. He ended up earning three letters as an end.

FEW more Bob Zuppke witticisms: "No director of athletics, as a rule, holds office longer than two unsuccessful football coaches." "We don't care how big or how strong opponents are as long as they're human."

"No matter what style of offense a coach is using, if he is losing he wishes he had another." "A coach who thinks he has invented a new play generally forgets that a dozen others are credit. ing themselves the same way about the same play on the same day." . . . Recently a player asked Frank Howard about a blocking assignment after geting into the secondary. Howard said: "If he ain't wearing the same color of uniform as you have on, obliterate him." . . . This fall when Clemson played North Carolina, Jim Tatum was showing Frank Howard his new house. When they came to Tatum's den, his pride and joy, Howard looked at the wood and said: "Jim, you have the same kind of lumber on the inside of your house that I have on the outside of mine." . . . Iowa holds a one-mile team championship each fall. The team consists of five boys, each running a mile, the three best performances contributing to the team's score. This past fall there were 65 schools divided into five enrollment classes participating . . . Dick Perry, the fencing coach at the University of Detroit, might very well hold the record as the youngest high school coach in the country. He served as head coach of the Cooley High School (Detroit) fencing team at the ages of 16 and 17 . . . A recent study showed that in 14 states eight-man football is replacing the six-man game.

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Hugh McElhenny, star back of San Francisco 49ers, is a member of the Wilson Advisory Staff.

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ATHLETIC JOURNAL

America's First Coaching Magazine

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The Status of High School Football

EARLY in the month of November the "Chicago Daily News" carried a story to the effect, that there were fewer boys playing high school football in Chicago area schools than five years ago. The question which immediately arose was "Is this a local situation or is it generally true around the country?" In order to answer the question, and at the same time present a picture of high school football, the "Athletic Journal" queried coaches in 150 high schools in all the 48 states and the District of Columbia. This figure represents about 2 per cent of the number of high schools which sponsor football on an interscholastic basis. We received a very cooperative return of 74 per cent.

The number of participants in high school football when compared with five years ago has increased in 43 per cent of the schools; has remained approximately the same in 22 per cent; and has shown a decrease in the remaining 35 per cent. At the same time the male enrollment of the schools surveyed showed slightly better than an 11 per cent increase. Three quarters of the schools reported increases in enrollment ranging from 3 to 100 per cent, with the median increase being 16 per cent. One tenth of the schools reported decreases in enrollments ranging from 5 to 50 per cent. The average amount of loss in male enrollment for these schools amounted to 17 per cent. The remaining 15 per cent of the schools reported enrollment the same as that of five years ago.

Among the schools reporting an increase in the number of participants, 17 per cent felt the increase was under 10 per cent. Another 61 per cent judged the increase to be somewhere between 10

and 25 per cent, while 22 per cent felt the increase was more than 25 per cent.

Where interest in football as judged by the number of participants has declined, 44 per cent felt the decrease was less than 10 per cent. Thirty-eight per cent felt there were 10 to 25 per cent fewer boys out for football than was the case five years ago. In 18 per cent of the schools where interest had declined, it was felt the decline amounted to more than 25 per cent.

It would seem that while slightly more schools are reporting an increase in the number out for football, the increase is not what might be expected from the increased male enrollment to be found in the secondary schools. Whereas enrollments have increased approximately 11 per cent, the net increase in boys out for football is only approximately 5 per cent.

We divided the country into three sections, North, South, and West. The New England, Middle Atlantic, and East North Central states were classed as Northern states. In the Southern classification were grouped the South Atlantic, East South Central, and West South Central states. The West North Central states were grouped with the Mountain and Pacific Coast states to comprise the Western group. In the North, slightly more schools showed a decline in participant interest than reported an increase, the percentages being 45.3 per cent to 41.5 per cent. The balance reported interest about the same.

The Southern schools reported a decline in 42 per cent of the schools, an increase in 22 per cent, and interest the same in 36 per cent.

It was in the 18 Western states that participant interest showed a decided increase. Only 21 per cent reported a decline, while 26 per cent reported interest the same.

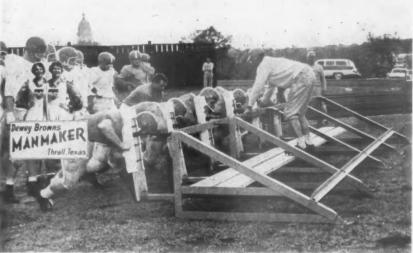
Increased participation was reported in 53 per cent of the schools. Thus, in this section three fourths of the schools reported interest equal to or better than five seasons ago.

The enrollment increases were fairly constant in all three sections. The Northern schools figured their enrollment was 10.3 per cent greater than five years ago, while in the South it was felt to be 10.6 per cent greater. In the Western states the figure was slightly more, figuring to be 12.7 per cent.

The next question that arises is: "Why with enrollments up is there only a small increase in those out for high school football?" It should also be pointed out again that almost as many schools reported a decline in interest as reported an increase. The "Chicago Daily News" listed some reasons as advanced by coaches in the Chicago area. On our survey we listed these reasons and asked the coaches where there was a decrease in football to rank them in importance.

"The desire to own and drive a car" was ranked

The Best Way To Develop——Speed—Conditioning—Timing—Offense Blocking—Charging—Defense



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When Good Coaches Say Something Smart Coaches Know It Pays To Listen

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AARON WADE, Football Coach, Centennial High, Compton, California: "We use two ManMakers in our system and they are tops. I wouldn't think of coaching a team without one. It is a must for every coach and every team."

T. J. VALENTA, Coach, St. Joseph's High, Bryan, Texas. "Your great ManMaker football machine is a wonderful developer of manpower. We used it for the first time this year, were undefeated and held our opponents to three touchdowns. We are sure that there is a relation between our success and our ManMaker."

WILLIAM L. WALL, Assistant Coach, Grandview Heights, Columbus, Ohio: "Thanks for the part ManMaker played in our undefeated season. We used it for the first time and I am happy to recommend it for both offense and defense."

RUEL B. BLAIR, Bruton Heights, Williamsburg, Virginia: "Wonderful! We used it for the first time but would not be caught without one from now on, for it was the main factor in helping us to our first undefeated season."

JOE TURNER, Woodville High, Savannah, Georgia: "We used the ManMaker last year and were state runners-up. The sled served its purpose well."

ANDY SPEED, Skowhegan High, Skowhegan, Maine: "The ManMaker has done wonders in creating all kinds of line and back maneuvers for our team."

"DUFFY" DAUGHERTY, Genial Coach, Michigan State ROSE BOWL Champions Says: "You may quote me. Eleven 12 flat boys go farther together than eleven 10 flat boys can go separately. The best way to time eleven boys to go together is on a 'ManMaker'."

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- Just The Best -

the most important reason that participant interest in football was lagging. Closely allied to this explanation was the second reason, "Too many goodpaying part-time jobs." A number of coaches pointed out that one explanation was dependent upon another. Better than two thirds of the coaches selected one of these two explanations as their number one reason for the decline in interest.

As might be expected, some strong feelings were expressed against the driving of cars by high school students. A Massachusetts coach would raise the driving age requirement to 18. A Maryland coach is in agreement, as is a Washington coach. A Michigan coach would outlaw all teen-age driving.

"The lack of encouragement from parents" was considered the third in importance by all the coaches. Sixteen per cent of the coaches felt it was the most important reason.

Closely related are the next two reasons, "Dislike of the practice routine," and "Boys of today are softer." In evaluating the answers there was only a hundredth of a percentage point difference between the totals for these two explanations. Likewise, each received the same number of first-place votes. One coach took violent objection to the suggestion that the boys of today are softer and penned the notation, "Not so - bigger - better - tougher!" A coach from the St. Louis area said, "Not soft, but a little lazy and seem to work just hard enough to get by." A Washington coach stated, "Educators still tend to play down athletic competition for fear of overemphasis. We must not play down competition." From a California coach, "Boys are not now willing to pay the price of hard work for achievement. This attitude reflects our 'theory of mediocrity' which has invaded our public schools as a result of 'education for everyone'." In the same vein was this comment from a Pennsylvania coach, "The trend to eliminate competition and elevate intramurals." A West Virginia coach touched on the same thought when he said: "Have lost the idea of personal sacrifice necessary to enjoy the rewards of competition." A coach from the northwest part of Ohio reported, "The younger boys do not want to practice for two years before they can get to play in a number of games." A Vermont coach reported, "Athletic inclination is declining due to a changed mode of living influenced by push buttons and hot rods."

The fear of injury or the matter of injury itself is closely connected with the two explanations in question. A Pennsylvania and a California coach mentioned the matter of injuries while an Eastern prep school coach pointed out that football injuries are over-publicized, while injuries in other sports are rarely mentioned in the press. Two Midwestern coaches criticized their state insurance plan. In one instance the rates were too high. Another said the the coverage was not enough, and hence parents

would not let their sons incur the possibility of a large hospital bill through injury sustained on the football field. A coach in one of the Western states concurred by stating that their state program was inadequate and too expensive.

Only one coach selected the explanation, "The varsity letter no longer carries the prestige that it did formerly," as the prime reason for the decline in the number of football participants, and the coaches in general ranked it last among the six suggested explanations.

An Arizona coach had this to say — "Today there is an attitude that going out for sports does not have enough reward. I believe this is a reflection of the attitude prevalent in the nation in general — the idea of what's in it for me."

A number of coaches commented upon the outside activities both school and nonschool sponsored. An Oregon coach reported that in his locality too much emphasis was placed on social life, dances, and fraternities. A Georgia and a Nebraska coach each specifically mentioned music in regard to other school activities. A New York coach pointed out the stress placed upon "developing the well-rounded individual," with resultant emphasis upon badminton, archery, etc. Television was mentioned as a competing influence by both a Virginia and a Nevada coach.

A Georgia coach seemed to sum up the feelings of a number of coaches when he said: "Too busy with other activities that offer pleasure without having to pay the price of conditioning."

Because there is not a clear-cut reason for the failure of high school football participation to keep pace with the increase in high school enrollment, there is no clear-cut solution. Instead, a number of coaches outlined some possible solutions or related successful efforts on their part which has caused participation to increase in their schools.

A Northern Illinois coach pointed up the problem in these words: "A 'football spirit' and tradition must be the principal ingredients in attracting boys to the sport. This spirit is based on high standards of personal conduct, self-discipline, and a tremendous team pride. A boy must want to devote his interest to football above everything else. Outside interests such as car, girl, and job must not conflict with his desire to become the best football player possible."

How is this "football spirit" to be developed? A Michigan coach feels that the booster club composed of parents of the boys has been largely responsible for their strong "spirit." The booster club pays for a trip to Chicago or some neighboring large city.

A West Virginia coach believes that the place to build a strong community-wide football spirit is through the parents of the players. They have a parents' club, show movies of the previous week's tl

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game, discuss the coming game and their planning toward it.

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A Massachusetts coach seemed to hit the nail on the head when he said: "In the old days when boys had more free time and played football for something to do, the famous pre-game and half-time peptalks were a part of the coaching job. Now the emphasis has changed. The pep talk must come before the call for candidates with those football players who can, helping with general missionary work. A follow-up is then necessary to sell the parents so that there is encouragement at home."

A successful Ohio coach reports that in less than five years they have increased the number of boys in their football program by 40 per cent. "We found that a certain number of boys have to be contacted before they will come out. We let pride go out the window and went after these boys."

A Pennsylvania coach stated, "Encouragement and interest of the parents is perhaps the most important factor in building football interest." A Massachusetts coach stresses scholarship among his squad and plays up the fact whenever a player is on the honor roll or has been accepted in a college. He reports that a number of parents have urged their boys to go out for football, preferring to have them associate with good students. Incidentally, this coach reported that half of this year's squad was on the honor roll.

An Oklahoma coach said: "It is becoming increasingly difficult to compete with the spending money, the cars, and the girls when you have training rules, practice, and hard knocks to offer in exchange. It seems that we must approach the parents and potential athletes with a set of values which they have apparently forgotten about since the depression and the war years."

The general feeling expressed so far is that the parents are a most important stepping stone in building a "football spirit." The coaches have to do a public relations job in selling the community, the parents, and the students. A Montana coach points the finger squarely at his colleagues and accuses them of being lax in public relations, especially with the student body.

Whereas some coaches have placed the blame on school administrative policies, a Missouri coach gives credit to the administration in his school. He said: "We feel our football program has improved because of the increased emphasis by the school administration (realization of many important values of a well-organized and well-administered football program), and the public selling job done by our coaching staff in influencing parents and pupils of the values of a football program."

A New Jersey coach feels a program of junior varsity, freshman, and sophomore teams is important. A New York coach believes a program should be started as early as fourth grade in order



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to develop good habits at an early age. A Kansas City coach feels that young boys should be taught football, but that teams should be carefully selected as to size. A Michigan coach feels that a junior high school football program would help their participant interest. An Ohio coach would develop a program of younger boys along the lines of Little League. An Arkansas coach feels that youth football is not good because the boy is either "burned out" or spoiled from too much attention.

A Pennsylvania coach felt, contrary to the belief of many, that the large joint high school movement would aid the athletic program, this movement had actually hurt the program because so much time was spent in transporting the students to their homes. Several other coaches commented upon the problem created by transportation sched-

ules

A Mississippi coach felt that the early start of football practice in August kept a number of boys from coming out due to summer jobs, travel, camp

programs, etc.

This then is the situation as high school football begins to look forward to another season. The number of participants is increasing slightly, but the increase is not keeping pace with the increase in enrollment. There are a number of reasons for this fact. These might be summed up in the phrase, a change in the sense of values. In many instances, outside interests have come to mean more than the lessons, joys, and comradeship to be found on the football field. The answer is a strong public relations effort aimed at the students, the parents, and the community.

Interpreting the Total Athletic Program Via Home Visits

By CHARLES T. AVEDISIAN

Director of Athletics, New Britain, Connecticut, Public Schools

HOME visits with the parents of the boys who participate in the interscholastic athletic program are the best means for the coach to use in interpreting the total program. We are not inferring that the game itself, newspaper articles, radio, television, bands, baton twirlers, cheerleaders, the homecoming ceremonies, and a fathers' or mothers' club are not important. Without the color aspects, the public would develop limited viewpoints, and the educational value of the athletic program to students, schools, and communities would be clouded. Opportunities should be provided for parents to know more a bout interscholastic athletics if the misunderstandings, misguided efforts, false practices, deemphasis, curbs, and other negative factors which creep into the general overall picture, are to be controlled and understood. A great deal of negative thinking is present in too many communities, People must be stimulated to the extent that they become conscious and willing supporters of

CHARLES AVEDISIAN played football at Providence College where he was selected as "Little all-American." He played with the New York Giants from 1941-1944 and then began his coaching career at Horace Mann School in New York City. Avedisian coached football, track, and swimming before accepting his current position.

athletics.

At a meeting of the New Britain Athletic Council, representation on which includes the coaches, director, principal, baton twirlers, faculty manager, captains, etc., the director outlined a plan for home visits with the parents of the boys who were members of interscholastic athletic teams. After a year's experience with this method of reaching the parent, the coaches, school administrators, students, and

parents were convinced of its basic public relations value in making our athletic program and the total education program more easily appreciated and understood.

The steps which were followed in this plan are: 1. Letter to the parent. 2. Telephone call and consultation with the student-athlete. 3. Collection of material. 4. Home visit. 5. Follow-up.

Letter to the Parent

One week prior to the home visit, a form letter is mailed to each parent. This letter is one which can be used by a coach in any sport. It explains the nature of the visit and contains a request for an appointment to visit at home in the evening. In the beginning, coaches will find it necessary to make a number of visits to the homes of the football players bacause of the large size of this team. In future years they can concentrate on the sophomores.

(Continued on page 63)



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From research... in the lab and on the field... comes the E700 plastic helmet, the lightest and most protective helmet ever made! Exclusive MacGregor construction eliminates shock from both angle and straight-on blows. Increased peripheral vision accomplished by unique contoured design and shape. Strategic reinforcing of vital areas... particularly where face mask attaches... gives added strength, added protection. The new E700 has latest application of the MacGregor "Geodetic" Crown Suspension (Pat. No. 2,679,046)... scientifically designed to cradle the head.



Never before in the history of the game has there been a helmet that provides so much protection . . . yet weighs so little! Compare . . . and feel the difference! The new E700 weighs less than any other tootball helmet now on the market!

MORE COMFORT... LESS FATIGUE...

The E700's light weight, soft padding, flowing ventilation and perfect fit automatically produce more comfort for players . . . important in games and during long daily practice sessions.

HIGHEST DIMENSIONAL STABILITY...

Shock resistant shell is made of a new plastic formulated primarily for high impact strength. In the laboratory and in actual games, MacGregor E700's withstood every test. The lustrous surface proved practically dent-and-scuff-proof. The plastic material is not affected by heat, cold, humidity, sun or rain.

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Its smooth, streamlined lines give the E700 a "smart-as-tomorrow" appearance. Players and fans alike appreciate sharp looking teams. Available in wide choice of colors, with a variety of striped color combinations.











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TOP VIEW

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Hitting Breaking Pitches



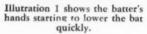




Illustration 2 shows the bat being leveled off early.

HE curve ball is the most difficult pitch for most batters to hit. This ball has certain characteristics which make it more difficult to hit than other pitches. When started in its flight toward the batter, it is an intimidating type of pitch because the fear of being hit is projected into the batter's mind. Furthermore, the curve ball, when thrown by a righthanded pitcher against a right-handed batter, breaks away from the batter's power. At the same time it usually breaks at a downward angle, thus playing a dual role of breaking downward and away on the same pitch.

Because of the often experienced difficulty encountered in hitting it successfully, the curve ball has been called the great separator. It separates the men from the boys—the good hitters from the weak ones. It is this type of pitch which is the bane of the rookie's existence. This is the pitch which led to a rookie, when writing home, say: I'll be home soon, the pitchers are starting to curve me.

Other types of breaking pitches are the slider, screwball, knuckle ball, palm ball, fork ball, and various change-of-pace pitches.

Types of Curve Balls

Curves can be classified into the angle of break, which is in turn dependent upon the angle of the pitcher's arm in releasing the ball. A high arm angle or action will result in a downward breaking curve ball which is sometimes called a *drop* by amateur players, In professional baseball, all types of curves, regardless of the

angle of break, are called curve balls. Individual players mentally catalog the type of curve which is thrown by each pitcher.

In all probability the three-quarter curve is the one thrown most frequently. It is so named because the angle of the pitcher's arm in releasing the ball is between that of an overhand pitcher and a sidearm hurler. This type of curve ball breaks down and away from a right-handed batter when it is thrown by a right-handed pitcher.

The sidearm curve ball is started in low flight toward the batter (usually about hip high), and then it sweeps or breaks away from him toward the plate. This pitch may start more directly toward or even slightly behind the batter, but its angle of break is more horizontal than the other two types of curve balls.

Underhand pitchers can make an underhand curve ball rise slightly as it sweeps away from the batter, due to the low angle of release of the ball and its slight upward angle of

The crossfire curve ball is a special type of curve which is used under certain circumstances. In executing this pitch, the pitcher steps across his body with his stride foot more directly toward the batter in order to make the hitter think the ball is being thrown directly at him. It is also a more difficult pitch to control due to more difficult body actions in

By JAMES SMILGOFF

Baseball Coach, Taft High School, Chicago, Illinois pitching. Ewell Blackwell, former pitcher for the Cincinnati Reds, was famous for this pitch. Many batters stood up at the plate rather loosely against his pitches. Their reaction of uncertainty became known as Blackwell fever.

Depth of the Curve Ball

Curve balls have depth as they cross the plate, and some curves break sooner than others. Various curves start to break sooner, but then break or sweep longer, thus creating a larger curve ball. Each batter must use imagination to visualize whether the curve will sweep wide or hit the outside edge of the plate for a strike. Some curve balls break late and closer to the batter. These are not apt to be sharp, and have a smaller breaking angle,

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When hitting against curve balls, the depth of the strike zone is important because a ball curving across the plate may do so at many different points and at various heights. It may catch the front edge, middle or back corner of the plate as it passes through the strike zone.

Sliders

Another type of breaking pitch is the slider. This is a pitch which breaks about half as much as a curve, or slightly less than half as much. It is similar to a three-quarter fast ball in speed which breaks away from the batter when both the pitcher and the batter are right-handed.

There are two types of slidersnatural and artificial. The reaction of the natural slider is similar to a ball

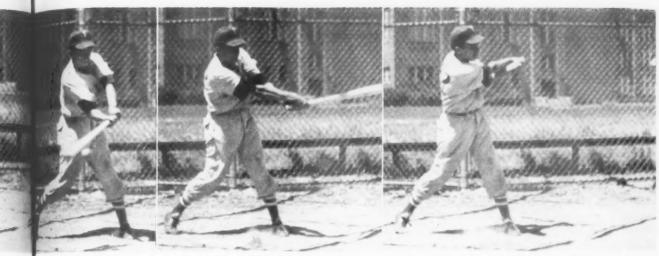


Illustration 3 shows the batter meeting a pitched ball with authority.

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Illustration 4 shows the batter's hips remaining inward toward the plate after the swing.

Illustration 5 shows the batter's body facing the direction of the batted ball on the follow-through.

that sails when thrown. The artificial slider has a spin on it similar to a weak curve ball. Very few pitchers can throw a natural slider which sails. Many pitchers can learn to throw an artificial slider in varying degrees.

Change-of-Pace Pitches

Change-of-pace pitches are thrown at a slower speed than either fast balls or curve balls. These pitches are many and varied in type. The main purpose of the change-of-pace pitch is to spoil the batter's timing and to throw him off balance by causing him to stride too soon in order to dissipate his batting power. Change-of-pace pitches may be slow curves, slow straight ones, knuckle balls, fingernail balls, palm balls, blooper pitches, etc. It is best to leave the change-of-pace alone unless there are two strikes on the batter. Under these circumstances mental alertness and anticipation of the pitch are the best weapons to use.

Prerequisites in Hitting Curve Balls

In order to hit well against curve ball pitching, the batter must have the courage to stand up against a ball which is thrown close to his body. He must also be prepared mentally by knowing something about the characteristics of various types of curve balls. The batter must be able to visualize the manner in which a curve ball reacts and breaks. Its line of flight from start to breaking finish must be studied until it is familiar to the batter. He must be ready to hit the curve ball and must be able to anticipate it occasionally.

In order to be successful in hitting the curve ball, a batter must practice hitting it frequently. Experience against the curve ball is an important factor in curve ball hitting success. The batter who hits constantly against fast ball pitching is missing valuable experience relative to curve ball bat-

On a scouting mission not too long ago, we had the pleasure of sitting next to a major league catcher who had about twenty years experience. As one of the class C minor leaguers who was being scouted showed a continual weakness against the curve ball, this former major league catcher turned to us and said: The curve ball is a strange creature to that lad. Yes, it appeared strange to this batter because he apparently saw curve balls only during games, never during batting practice.

Hitting Against the Overhand Curve Ball

An overhand curve ball is a devastating pitch against many batters. When this ball breaks sharply downward, it approaches the horizontally moving bat from a vertical plane, thus creating a large angle of difference, close to 90 degrees. It is similar to trying to hit a line drive against a ball that was dropped from a height somewhere above the batter.

The batter should try to hit this type of curve during the middle of its break. Trying to hit this pitch at the beginning of its break might lead to swinging at bad pitches, since this pitch usually starts in flight above the strike zone. Trying to hit it at the end of its break brings the bat

down farther away from its power position, and farther from the batter's line of vision. The batter should move up slightly toward the front of the batter's box, opposite the plate, against a pitcher who throws this type of curve ball consistently.

Hitting Against the Three-Quarter Curve Ball

The three-quarter arm angle curve ball is the most common type of curve. When thrown by a right-handed pitcher, it slants downward and away from a right-handed hitter. Most right-handed batters try to hit this pitch at the back or tail end of its break. This ball is often necessary if the same batter stands toward the back end of the batter's box in order to get a longer look at the pitched ball. Some batters do not like to reach too far for the curve ball outside so they stand directly opposite the plate and try to hit it in the middle of its break. Occasionally, batters talk about standing at the front end of the batter's box to hit the curve ball before it breaks. This is a false notion and an impossibility since the starting line of flight of a curve ball is usually outside the strike zone. Usually, this type of batter hits the curve ball early in its breaking angle. However, alert opposing pitchers will combat this thinking by throwing inside fast balls consistently in order to give the batter less time to react to the pitch.

Left-handed batters find the threequarter curve ball breaking downward and inward toward them. Usually, they stand opposite the plate or slightly back of it, since the ball must come in toward them to be a strike. By standing opposite the plate against a right-handed pitcher's curve ball they have better bat leverage and plate coverage.

Most left-handed hitters like to assume a closed stance against lefthanded curve ball pitchers. These hitters move their front foot (stride foot) closer toward the plate, and try to hit this type of pitch toward the opposite field.

Harvey Kuenn, American League infielder, gives his ideas on curve ball hitting by saying: I think the most important item in hitting against the curve ball is weight distribution. I try to keep my body weight away from the plate and over my toes. My hips are inward toward the plate on the stride so that my body power is still toward the curve ball which is slanting away (Illustration 1). I get quite a few curve balls because I bat toward the top of the batting order, and our Detroit club has a number of good hitters following me who get the same type of treatment. Too many amateur batters pull their weight away from the plate and from the approaching curve, thus pulling their power away from the pitched ball.

Secondly, it is important for a righthanded hitter to learn to hit a righthander's curve ball in the direction of the break (to the opposite field). Trying to pull an outside curve ball often results in poor swinging leverage, overbalanced body power, and too many double plays via the opposing shortstop. Try to hit each ball where it is pitched. On the curve ball going away from me, I try to keep my rear hip inward toward the plate as I start my swing well out away from my body in order to get good swinging leverage toward the opposite field.

I find the inside curve ball fairly easy to hit since the oncoming pitch forces me to stride away from the plate and toward my pulling power. Most home runs against curve balls are hit against inside curve balls because these are apt to hang; they seldom break sharply. This type of pitch enters the balter's inside power zone, and is easy to pull.

Assuming a fairly wide stance should help to keep the batter's body in better balance by cutting down the length of his stride. Thus, the batter's body does not come forward too soon and does not become overbalanced too far forward to allow for a powerful swing toward the ball.

A fairly wide stance accompanied

by a short stride helps to stabilize body weight distribution toward more efficient curve ball hitting.

Hitting the Sidearm Curve Ball

In order to be effective, the sidearm curve ball must be kept on the outside corner of the plate. This type of pitch is less intimidating to the batter than the three-quarter curve ball because it starts lower in its line of flight toward him. Experienced hitters are less fearful of this type of pitch because its line of flight is farther away from their heads than the three-quarter curve. The sidearm curve ball is more of a wide sweeping type of curve ball. It takes a split-second longer for this pitch to reach the plate than the three-quarter curve ball, causing many batters to stride too soon and just tap at the ball with overbalanced power.

This curve is usually referred to as a schoolboy curve by professional players. Its effectiveness lies in its intimidation of weak hitters. Good hitters usually are not bothered too much by the sidearm curve ball from right-handed pitchers. Left-handed batters are apt to have slightly more difficulty against left-handed sidearm curve pitchers due to their lack of batting opportunities against these pitchers. The platoon system has also created this unfamiliarity, and has resulted from it.

Hitting the Crossfire Curve

As a rule, the crossfire curve is a surprise pitch, and also an intimidating one. It is usually thrown when there is a count of one ball and two strikes on the batter. Occasionally, it is thrown with other ball and strike counts on the batter, depending upon the pitcher's confidence in the pitch. This type of curve ball takes the longest to arrive at the plate due to the pitcher's larger and longer actions in releasing the ball, and in the ball's longer distance of travel. In order to hit this pitch, the batter must retain his stance position until the ball is well on its way toward the plate before striding. The batter who times this pitch with his normal stride will find his power dissipated too far forward too soon. In order to meet it successfully, a delayed timing action is needed against this pitch. A right-handed pitcher should never crossfire a left-handed hitter since this pitch loses its intimidation factor against the southpaw batter. The reverse is true between the southpaw hurler and the orthodox swinger.

Hitting the Slider

The slider is most effective against batters who try to pull the ball too soon, and against those who determine the type of pitch too early. In order to hit this type of pitch, the batter must follow the ball a bit longer in its approaching flight, and watch it more closely for spin detection and break. The batter should keep his body weight inward and toward the plate a split-second longer than he does against the fast ball. It may even be necessary for him to cut down on his swing since the pitcher gains more variety to his pitches when he adds his fast ball and curve ball to the slider. Many pitchers have become harder to hit since they added the slider to their repertoire.

Frank Lary, Detroit Tiger pitcher, has had good success against rival teams since he learned to master the slider. Many of his victories against the powerful New York Yankees were due in a great measure to his use of this pitch. As a rule, the slider is used as a substitute and variety pitch in place of the fast ball. Many pitchers throw it on the first pitch to offset a batter who guesses. It is also thrown frequently against good hitters who have a three and two count on them. A situation of this kind arose in a game between the Detroit Tigers and the New York Yankees with Lary pitching for the Tigers. With Mickey Mantle at bat and runners on the bases, Larv had to be mighty careful. After running the count to three and two, he decided on a slider and got Mantle out to save the game. A fast ball or even a curve did not seem to be the proper pitch to a dangerous hitter in this spot. The slider was sort of an in-between pitch which served the situation best.

Hitting Change-of-Pace Pitches

The purpose of the change-of-pace pitch is to throw the batter off stride or to make him stride too soon. Most batters fail to hold the bat back on this early stride. Unwittingly, they move it forward to a position in front of their chests. Holding the bat in this manner cuts down on the length and power of the swing. It is important to keep the bat back on the stride so that a full swing can be taken toward the change-up pitch even though the stride is taken too soon.

Against knuckle ball and fingernail ball pitchers it is best for the batter to stand opposite the plate in order to give the ball less chance for a big

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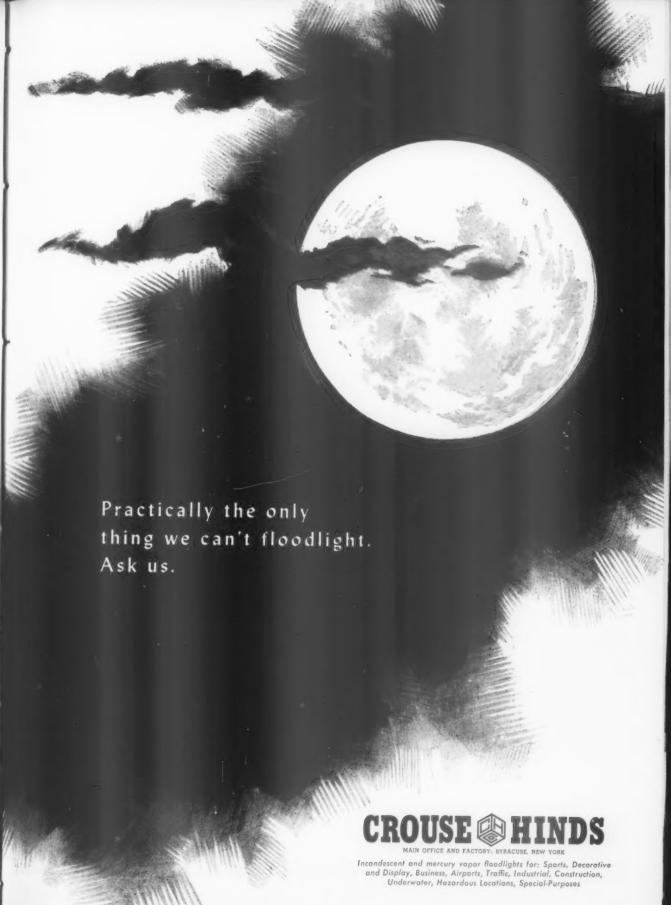
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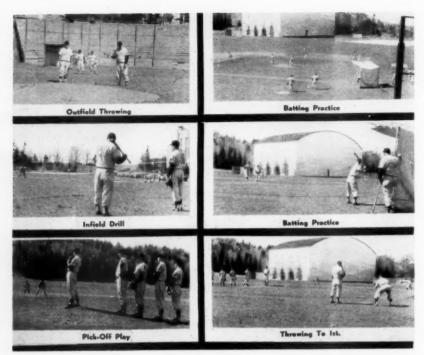
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supervised, can further the progress of a team more than any other teaching method. However, the player must learn the correct way. He can practice indefinitely and still not improve his performance a great deal. The coach has the job of guiding a player to success through the use of demonstrations, explanations, and practice periods.

Throwing by the outfielders precedes the infield drill. The coach should fungo flies from near the pitcher's mound, and inasmuch as the first baseman is the cut-off man on throws to home plate, he will handle the baseballs for his coach. Each outfielder should make several throws to second, third, and to home plate. These throws must be low and hard, and come in on one bounce. Cut-off plays should be practiced on these throws. The coach should make the flies easy to handle because here throwing is the main concern. It is imperative that the outfielders be thoroughly warmed up before it becomes necessary for them to cut loose.

Infield practice should take place

Baseball Drills

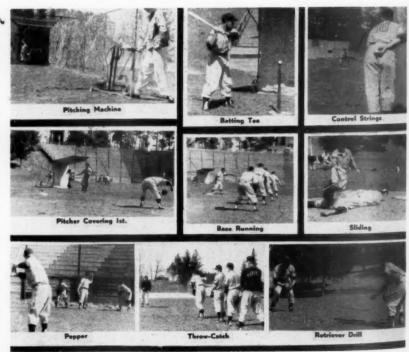
By DON WEISKOPF

College of Education, University of Idaho

A baseball team's practice programshould be built around the use of sound, effective drills. No other coaching technique furthers the learning process of a player more effectively than the well-supervised drill. Furthermore, the coach has the important job of supervising these drills.

In this article, we shall present a group of drills which can be used to train and condition a team to its maximum efficiency. These drills are all standard and are used by professional, collegiate, and high school teams. At the University of Idaho, we have found them to be most satisfactory and have based our training program upon the utilization of these drills.

The baseball player strives to perfect his skills to the greatest degree by repeating an action until it becomes a habit with him. All practice periods are based upon repeating actions over and over, with the performer always working toward perfection. The drill method provides this means of repetition, and if properly



immediately after the outfield throwing. While the infield drill is going on, the coach should have two pitchers hit fungos to the outfielders. The infield drill can be started by allowing the players to throw the ball around informally for a minute or so in order to warm up. Then the formal drill, which usually consists of four or five rounds, should be started.

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The effectiveness of the infield drill depends upon the ability of the fungo hitter. Although the balls should be hit solidly, the players can be made to look better if they are given easier bounces.

The third baseman receives the first ball and throws overhand to first base. Then the first baseman takes the throw and fires the ball home. The catcher takes the ball at the plate and throws to third base. Now, the third baseman makes a sidearm throw across his body to second, where the second baseman catches the ball and pivots, making his throw to first. The first baseman takes his throw and relays the ball home. This throw and relays the ball home. This drill is called around the horn. Have the boys make good, accurate throws—not too hard, but never a lob.

The drill continues with ground balls hit to the shortstop and to the second baseman. It is a good idea to have the fielder who fields the ground ball receive the throw from the catcher.

During the second round, the coach hits the ball a bit harder and makes the fielder run a step or two to the right or left to field it. The try for a double play is used in the third and fourth rounds, with the coach calling play for two. Finally, the infield should be drawn into the edge of the grass for a play at the plate. A slow roller that he can charge, pick up, and throw home knee-high to the catcher should be hit to each infielder.

We cannot stress too much the need for chatter and hustle in the infield drill. Have the boys sound-off and keep up a steady stream of chatter. The game performance of a team is relative to the way it practices.

The pick-off play is used most often at second base, and involves the pitcher, shortstop, and base-runner. Instruct the balance of the pitching staff to stand near the mound while waiting their turn. The pick-off play may use the daylight count or feint principles. Timing is most important in this drill.

Using the count play, the pitcher takes his set position on the rubber

(Continued on page 67)

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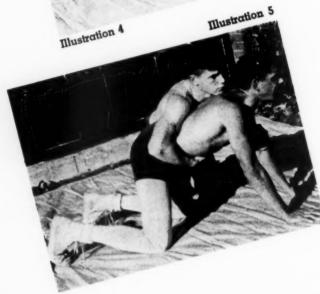
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By AL HURLEY Wrestling Coach,

New Trier Twp. High School, Winnetka, Illinois



SINCE it may affect our use of certain escapes or reversals, we sometimes find it necessary to alter our referee's positions. We feel that a description should be made of two

slightly varied positions.

In the short position, the wrestler should assume a referee's position which meets rule book requirements, but place his buttocks well back toward his heels, thus allowing for a better forward spring. This position keeps the opponent back farther, but it also places his hands closer to the wrestler's ankles (Illustration 4).

As shown in Illustration 5, when using the extended position, the wrestler should again take a referee's position which meets rule book requirements. However, in this position his body should be extended farther forward, thus placing his buttocks directly over his knees. When this position is used, the opponent must move forward farther in order to keep his arm around the wrestler's waist. This means the opponent's hand which is held at the waist is farther from the wrestler's ankles.

Series J shows the stand-up.

Using the extended position, the wrestler should swing his right foot forward and to the side and place it on the mat.

At the same time, he comes to a standing position by pivoting and placing his left foot on the mat (Il-

lustration [1).

As shown in Illustrations J2 and J3, he grasps the opponent's right wrist with his right hand. Then he drives his left elbow backward so that his left arm is between his body and that of the opponent.

Illustration J4 shows the wrestler placing his weight on his right foot

and reversing his left leg backward between the opponent and himself so that he faces the opponent.

The wrestler should maintain a good balance, his body should be bent slightly forward, and his buttocks should extend backward toward the opponent. For successful execution, he should remember to control the opponent's hands or arms. The opponent must be controlled so that he will be unable to pick up the wrestler's near leg or use some other counter. All parts of this move should be executed almost simultaneously. Rapid and decisive action makes for the best results.

The extended position should be used in the speed sit-out which is shown in Series K. This position should be used because it keeps the opponent's hands farther from the wrestler's ankles. This is particularly true in the case of the hand the opponent holds at the wrestler's waist.

Illustration K1 shows the wrestler swinging his right foot forward laterally. Then he places it on the mat momentarily.

Placing his weight slightly on his right foot but mainly on his left hand, the wrestler shoots his left foot forward as hard and as far as pos-

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Series K-The Speed Sit-Out

sible (Illustrations K2 and K3).

As the momentum of his left leg carries his body into an extended position, the wrestler drops his left shoulder, kicks his right foot forward, and turns onto his stomach (Illustration K4).

As shown in Illustration K5, the momentum of his driving thrust should bring the wrestler to a position on his hands and knees facing the opponent.

Speed, coordination, and tremendous drive make this move successful. Emphasize the timing needed for placing the right foot and following immediately with the hard-shooting

looked.

Series L shows the switch.

From a slightly extended short position, the wrestler moves his left arm across and places his left hand in front of his right hand,

As shown in Illustration Ll, he uses his right foot as a pivot and places his weight on his left hand. Then the wrestler shoots his left leg under his body and forward.

Illustration L2 shows the wrestler swinging his right arm backward over the opponent's right arm and driving his elbow down hard to the mat. At the same time he leans against the opponent's shoulder and extend-

Series J-The Stand-Up

left foot.

All parts of the move must become as nearly simultaneous as possible in order to keep the opponent from catching one of the wrestler's ankles. The wrestler must drive far enough out from the opponent to prevent any possibility of a drag or a following counter. This is an excellent escape, but a dangerous one of it is executed improperly. A slow and weak execution may result in the suck back counter which places the wrestler on his shoulders. Speed, timing, and terrific drive cannot be over-

ed right arm to flatten him to the mat.

As shown in Illustration L3, the wrestler rotates his hips to the right and goes behind.

The near side switch is shown in Series M, and has been made more successful because of the type of far side switch described previously.

The wrestler assumes a referee's position similar to the one used for the far side switch.

Then he moves his left arm across in front of his body toward the right, hoping the opponent will make a

L Series L-The Switch







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natural attempt to recapture it with his left hand (Illustration M1).

When the opponent attempts to recapture the wrestler's left arm, he places his left arm across under the wrestler's chest.

The wrestler swings his left arm windmill style back over the opponent's extended arm and clamps it under his armpit.

Illustration M2 shows the wrestler placing his right hand on the mat in front of his left shoulder. As this under his body. As he shoots his right leg through, the wrestler turns hard into the opponent's left shoulder (Illustration M3).

Illustration M4 shows the wrestler whipping his left knee into the opponent's upper left thigh. He slides his hips outward, and goes behind.

his hips outward, and goes behind. When he is reaching behind his left leg, it is important for the wrestler to extend his body forward slightly as he places his right hand on the mat. This move opens the angle behind his left knee and allows room for his left hand.

Many coaches are familiar with the holds described in this article. However, we believe that this simple coverage of holds will prove valuable as a basis for review, and hope that a few new ideas have been presented.



Series M

The Near Side Switch

A L HURLEY graduated from Oklahoma State University and then received his master's degree from lowa. He coached football, basketball, and track at Benson and Central High Schools in Omaha before going to New Trier in 1948. In his nine years there, his wrestling teams have won three state team titles, finished second twice, and third once. In addition, his wrestlers have won over a dozen individual titles. Hurley assists in football and teaches in the physical education department.

movement is being executed, the wrestler catches behind his left leg just above the knee with his left hand.

Then the wrestler places his weight on his right hand and, using his left foot as a pivot, shoots his right leg Guaranteed NEEDLE-FREE 100% SAFE I

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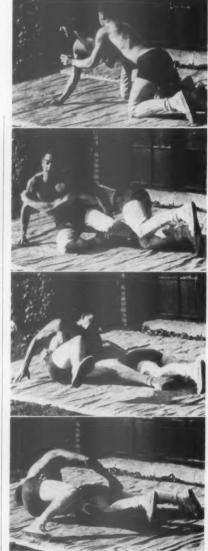
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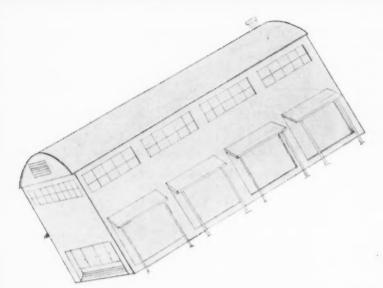
NATIONAL

362 N. Marquette Street Fond du Lac, Wisconsin





for January, 1958



Gyms for July

By LIEUT. (jg) JOEL W. CARTER, USNR

Let us stop building multi-thoumost expensive gymnasiums are suitable only for winter use and become unbearably hot under the summer sun. Although the greatest need for an indoor athletic facility occurs when the winds blow and the snow flies, the construction of a building that cannot be used in the opposite season is not justified. Summer uses for gymnasiums are many and diversified.

Too many gymnasiums are designed only for basketball and other mid-minter sports. Because of the difficulty of heating the large, highceilinged spaces in winter, architects have kept openings to a minimum. Windows and doors are made to admit light and people but to keep the wind and weather outside. Such openings are often few and small, and no provision is made for getting the wind inside when it is needed. Once the sun has attained its brilliance and the winds have become just cooling breezes, a gymnasium of this type often becomes unusable. Its broad sides and large roof absorb the heat of the summer sun and pass it on to the air inside.

In order for a gymnasium to be usable in July, this hot air must be constantly pushed out by natural

breezes. Usually, the small windows and doors are insufficient. They simply are not large enough or in the right places to let the hot air blow out.

Big draught fans which pull the air the length or breadth of the building are used in some gymnasiums, but they are expensive and seldom completely satisfactory. Often they are inadequate when the temperature is very high or a large crowd is in the building. Sometimes they make too much noise for the spectators to enjoy plays and concerts for which many gymnasiums, especially in small communities, are in demand.

A gymnasium is too expensive a facility to be limited to one-season use. Summer needs are many and are becoming greater every year. Almost every community now has some sort of summer recreation program for which the gymnasium can be put to countless uses. In these programs, participants should be outdoors as much as possible, but certain activities must be held indoors. In addition, some sections of the country have such hot summers that strenuous outdoor activities cannot be held during the day. In these places activities must be conducted inside, out of the sun, in the middle of the day.

Colleges are experiencing larger en-

rollments in their summer sessions. Physical education classes, intramural sports, and recreational activities must often be held inside.

In many communities the gymnasium must double as an auditorium and meeting hall. When the crowd is large, the cooling problem becomes serious.

Coaches are usually in a position to make recommendations on new gymnasium construction and on modifications of existing structures. Architects and school board building committees should, and generally do, ask the advice of the people who use the buildings. When a new gymnasium is being planned, the coaches involved should make sure, before the plans are accepted, that it will not be the oven-type building. A coach who has a gymnasium of this type should look for the most economical way to renovate it, and then make recommendations to his school board.

In the Canal Zone where we have year-round summer, the heat problem has been solved in most of our gymnasiums. Instead of a closed-box type, the gymnasiums tend to be more of a high-roofed shed with the walls as open as possible. The roof provides shade and the air blows through freely so that the effect is similar to being under tall trees. These gym-

Fort Amador Gymnasium.

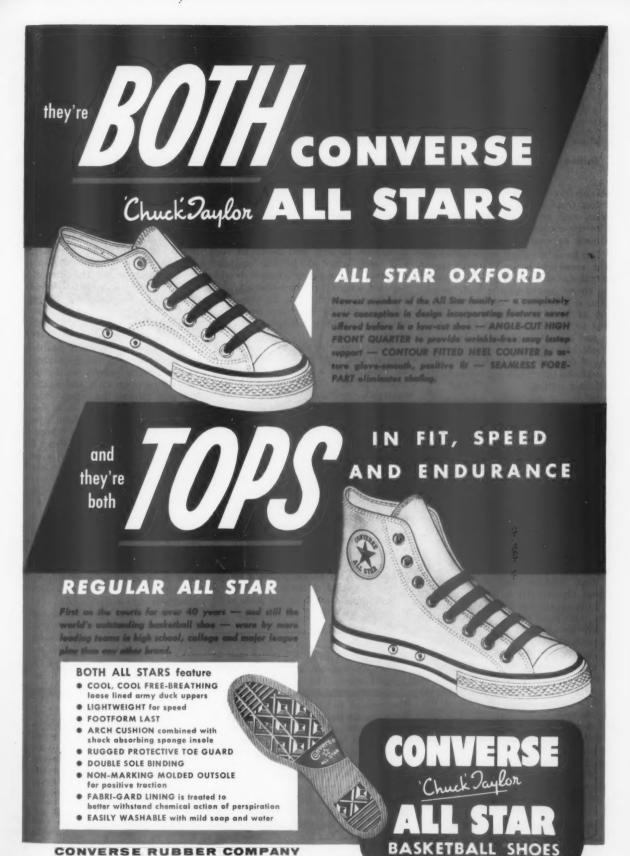


Balboa H. S. Boys' Gymnasium



Diablo Heights Gymnasium.





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Balboa H. S. Girls' Gymnasium



Albrook Air Force Base Gymnasium.



Reeder Gymnasium at Fort Clayton.

nasiums do not make basketball a perfect tropical sport, but the design makes such sports possible and provides the coolest gymnasium possible without expensive air conditioning.

The basic principle calls for abundant cross-ventilation with at least two sides of the building open. Where the entire height of the wall is not open, it is necessary to have ventilation at both the floor and ceiling level so the hot air will be pushed up and out. Most of our gymnasiums do not actually have ceilings for reasons of economy, but if they do, there should also be ventilation between the roof and ceiling.

Of course, buildings used in the Canal Zone are not suitable for the States because they are not designed to be closed and heated. However, by using a combination of this type and the typical American gymnasium, a building that is suitable for year-round use can be constructed. The amount of each type of construction used will depend on the climate where the gymnasium is located in the United States; the hotter the summer, the more ventilation needed.

The most suitable hot weather buildings are those which were built at Fort Amador and Balboa High School. Open walls on three-plus sides give the maximum amount of ventilation. The walls consist of heavy steel screen installed between the major supports of the building. Ordinary window screen is not practical because it is not strong enough to withstand burglary and blows from balls. Cyclone fencing or a similar material must be used. Although this is the coolest type of gymnasium, it is also the most difficult to convert to a unit which can be heated. Steel frame glass casement windows can be installed outside the screens but are very expensive if they are used to close the entire area. When single pane glass is used, a high heat loss is experienced in winter.

Large panels which can be installed in place of the screen, or in addition to it, offer the most practical means of closing a building of this type. Steel, wooden siding, sheet aluminum, asbestos siding or a combination are the most practical materials for such panels. These panels should be designed so they can be bolted or latched into place in the fall and removed in the spring. Weather stripping or gaskets should be used where the panel contacts the building to close cracks. In very cold areas it may be necessary to install two panels with an air space between them.

These panels should be small enough and light enough so they can be handled by a crew of men. The exact size and shape depends on the materials used and the shape of the

JOEL CARTER attended Georgia Southwestern College and Florida State, and holds a master's degree from Tennessee. Before going on active duty with the navy he was associated with the Americus, Georgia recreation department and the Knox County, Tennessee school system. During his assignment in the Canal Zone he has made a study of gymnasiums and many of his observations will prove helpful if more and more year-around use is to be made of school facilities.

openings they must fit. They should be sturdy enough to stand a semiannual move. The panels should be designed so they will harmonize with the rest of the gymnasium and provide an attractive public building.

A combination of casement windows and removable wall sections seems best. At the top of the wall a row of windows should be used to provide light and ventilation when the panels are in and to eliminate installing and removing panels at high levels. The entire wall below the windows can be removable if desired but a section ten feet high should be sufficient. The remainder of the wall can be fixed permanently.

If the panels are hinged to the wall on the top side, they may be swung up and out and supported on posts as shown in the accompanying drawing. Casement windows give upper level ventilation. This arrangement provides added shaded playing space, eliminates the necessity of storing the big panels, and solves the problem of rain coming in. Sliding panels may also be used. Each section can be pushed back into a section adjacent to it which does not open.

In the Canal Zone the problem of rain is solved by using overhanging roofs, wooden louvers on the bottom part of the open area, and a false roof half-way down the open side. All three of these devices were used in the Diablo Heights School gymnasium and the Balboa High School girls' gymnasium. In both of these buildings the main gymnasium is on the second floor above the dressing rooms and auxiliary spaces in order to receive more air. Two sides of these gymnasiums open almost completely from the floor to the ceiling.

A false roof and louvers were used on the Albrook Air Force Base gymnasium. Because this gymnasium is closed more completely it is not as cool as the others mentioned previously, but does offer an interesting variation in design. Louvers were used for upper ventilation and the lower walls open from the three- to the twelve-foot levels. The false roof and louvers keep the rain out.

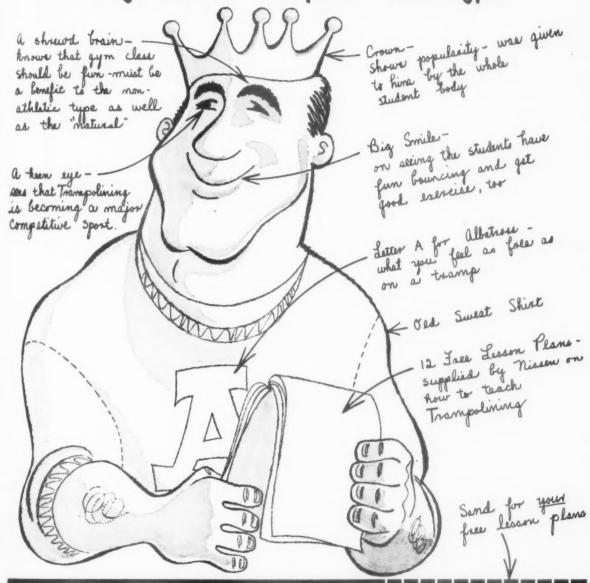
Reeder Gymnasium at Fort Clayton is the reverse of the Albrook building and shows a design that can be used almost intact in the States. It is not as cool as those which have ventilation, but it is usable. Installing glass in the windows above, closing the louvers at floor level, and a door of any type would be the only alterations necessary. Increasing the size and/or the number of louvers is recommended if this design is to be used in a very hot area.

These ideas are not a complete treatise on summer-conditioned physical education buildings. An architect

(Concluded on page 61)

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HURDLING is closely related to sprinting in that the important factors are to relax, maintain proper balance at all times, and keep the body in a position that will allow for maximum forward drive. All of the following qualifications are desirable, if not necessary, in a prospective hurdler. He should be reasonably tall so that he can clear the hurdle quickly and cause little interference with running rhythm. He must be very flexible and well coordinated in order to develop good hurdling form. Hurdling is a complex skill; therefore, the prospect must work hard if he wants to master the skill and at the same time train with the sprinters.

Because of the complexity of the skill, a high degree of perfection is not usually reached until after several years of practice.

120-Yard High Hurdles

This discussion of the 120-yard high hurdle race is organized as follows: the start, hurdling action, sprinting between hurdles, and the training schedule.

The Start. Because the first hurdle is a fixed distance from the starting line (15 yards), and the start in a short race is the most important part of that race, it is necessary for the hurdler to have a fixed pattern of steps to the first hurdle. A good test for determining how a hurdler runs is to remove the hurdle and leave the take-off line (a mark seven feet in front of the hurdle) on the track. Then have the boy take a regulation sprint start. The coach should notice where the take-off foot strikes the ground nearest the take-off line. Repeat the start until a fair amount of consistency is attained.

Then the start must be altered until the take-off foot strikes the ground approximately seven feet in front of the first hurdle. This may be accomplished in one of three ways depending upon the degree of alteration necessary. If a slight alteration is needed, the blocks may be moved closer to or farther from the starting line. If this adjustment does not solve the problem, the boy should try chopping or lengthening his first two or three strides out of the blocks. If the problem is still unsolved, the coach should advise the hurdler to reverse his feet in the blocks. Once a correct step pattern is determined, the boy should practice over two hurdles, from the blocks, until he runs that pattern consistently.

Another adjustment necessary for the hurdler to make is to be in an erect running position in time to clear the first hurdle, which is only 15 yards from the start. Therefore, he must straighten up sooner than the sprinter does. Outside of these two adjustments the hurdler's start is identical to that of a sprinter.

Hurdling Action. High hurdles are run with three running strides between hurdles, and the hurdle is cleared on the fourth stride. The barrier is not taken in three strides and a jump, but rather in four running strides, the last of which is longer and accentuated in action.

The hurdler should leave the ground approximately seven feet in

for maximum forward drive. At this time the trail leg is whipped forward and the next running stride is taken.

In order to clear the hurdle as quickly as possible, the runner must thrust his body weight forward, much the same as a high jumper thrusts his weight upward. This forward thrust of weight tends to pull the runner over the hurdle and to the ground in a minimum length of time.

In working for perfection in hurdling action, the athlete should keep these points in mind; clear the hurdle in the shortest possible time, let the hurdle interfere as little as possible with running rhythm, maintain as

Training for the Hurdles

By CLAYNE R. JENSEN

Physical Education Instructor, Utah State University

front of the hurdle and land approximately three and one-half feet behind it. In clearing the barrier his forward leg, led by the knee, should be driven upward to clear the hurdle, then stretched forward to near maximum. At the same time the upper extremity is thrown forward and downward to meet the upward driven leg. The arm opposite the lead leg (or both arms if preferred) is extended forward and the shoulder is dipped toward the knee of the lead leg. These movements are coordinated with the upward forward drive from the take-off leg.

As the lead leg clears the hurdle it is driven, with tremendous force, The upper extremity downward. should still be well forward in order to aid in the downward drive of the leg. As the leg is driven downward, the upper extremity becomes more crect. At the same time the trail leg is in a rapid forward motion. As the lead leg nears the ground, the upper extremity becomes more erect and the trail leg, with knee cocked and the loot turned outward, clears the hurdle. Upon contact with the ground, the runner must be sure that he maintains enough forward lean to allow

near perfect balance as is possible, and come off the hurdle into a good sprint position.

Sprinting Between Hurdles. The high hurdles are spaced 10 yards apart. If the runner covers 10½ feet in clearing the hurdle, 19½ feet must be covered in the three strides between hurdles. The average of six and one-half feet per stride presents no problem to a full grown, college age, athlete who is an experienced hurdler. But to many beginning high school hurdlers it is a major problem.

One of the beginning hurdler's most difficult tasks is to develop a correct and consistent step pattern between hurdles. Sometimes it is necessary for the coach to place obvious markers at the points where the feet should strike the ground. Some beginners have to use a lopping rhythm between hurdles in order to cover the distance in three strides. This action is often helpful during the learning period, but it must be substituted by an even, three-step sprint action before the hurdler can perform well.

A point to be emphasized is that the trail leg, as it clears the hurdle,

(Continued on page 58)

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Getting Better Football Game Movies

By HAROLD HAINFELD
Roosevelt School, Union City, New Jersey

DICK FLANAGAN

St. Peter's Preparatory School, Jersey City, New Jersey

FOOTBALL game movies are a valuable aid to the coaching staff and to the team. However, the cost of film is an additional expense in the athletic budget. Since few high schools can afford professional photographers, most coaches depend upon colleagues on the faculty, a member of the board of education, friends, alumni, and in some cases, students to film the game. These less experienced photographers, who in many

AROLD HAINFELD served overseas in the army, and following his discharge, he was appointed to the faculty in the science department of the Union City, New Jersey schools. Together with Dick Flanagan they have filmed over 80 football games during the past five years.

DICK FLANAGAN graduated from Panzer College and has had 15 years of coaching experience at Union Hill High School in Union City as well as at St. Michael's High School in Union City and St. Peter's in Jersey City where he is now assisting.

cases use the same equipment as the professional, need help to get better results for the coach. We are offering some suggestions to improve the quality and content of the game movies from the cameraman's point of view.

Basic and important to taking good football movies is a steady, elevated platform for the cameras. The area should be large enough to accommodate the cameramen of both schools, because very often both schools will be shooting the game. Height is an important factor in getting better game movies. Scouts and spotters get a better view of game action from an

elevation; therefore, the cameramen should be given a similar vantage point from which to take the game films.

The platform should be steady and solidly built; one that is shaky and unsteady can cause trouble. When using a telephoto lens, unexpected movement of a fraction of an inch at the camera is magnified into errors in feet in the action on the field.

Consideration should be given to overhead protection for the camera in the event of inclement weather. Moisture on the lens from rain or snow will cause the pictures to be out of focus. Another help for the photographer is providing a small table on which he can place his film and other equipment.

While we have not found many schools providing this type of area for cameramen, it seems difficult to understand why more schools have not provided better facilities. Cost of the film and the cameraman's fee are additional items in the budget. The films serve a valuable purpose as an aid to the coach and the team; therefore, a small additional expenditure will provide a good platform for taking game movies.

The platform should be constructed near the 50-yard line where the sun sets behind the cameraman. Shooting into the setting sun late in the afternoon can cause light streaks on the film and, if possible, should be avoided. Schools that have a press box, stadium or roof of an adjoining building where the cameraman has good facilities are fortunate.

Cost of the film is an important item in the budget; however, savings can be made. School officials are entitled to the 10 per cent excise tax exemption on 16mm film. A form can be obtained which may be duplicated and submitted to the film dealer. This amount can be a saving in the budget

(Continued on page 46)

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Griffin (Centennial, Compton, Calif.)		9.5	Calif.) Redding (South Side, Fort	Semi-Finals Lima, Ohio Relay	4:24.3 4:24.8
Weeks (Alhambra, Calif.)	So. Section Prelim		Wayne, Ind.) Mercellino (Sewanhaka, Floral	State	4:25.2
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Blanchard (Polytechnic, San Francisco, Calif.)	Cal Aggie Meet	21.3	Howard (San Bernardino, Calif.)	Chaffey Inv.	18.9
Duncan (Albuquerque, N. Mex.	State	21.3	Smith (Compton, Calif.)	Compton Cup	19.0 n. 19.1
Murphy (Hobbs, N. Mex.)	State	21.3	Sankey, (Centennial, Compton, Calif.)	Bay League Frein	13.1
Smith (Taft, Calif.)	Central Section Div	v. 21.3	Williams (Dorsey, Los Angeles, Calif.)	City Finals	19.1
440-Yard DeWitt (Berkeley, Calif.)	State	47.9	Bass (Springfield, Ohio)	State	19.2
Williams (Manual Arts, Los	City	47.9	Morgan (Snyder, Texas)	Red Raider Relay	
Angeles, Calif.)			Wright (Centennial, Compton, Calif.)	Bay League Prelin	n. 19.2
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Eisenbach (San Angelo, Texas)	Chaffey Inv. Texas Relays	48.6	Field E		Distance
Johnston (Connellsville, Penna.)	State	48.6	Pole V Brewer (North, Phoenix, Ariz.)		Distance
Balzarett (Eagle Rock, Los	City Prelim.	48.7	Breck (Santa Barbara, Calif.)	So. Section Finals	13-11
Angeles, Calif.) Baker (Southwest, Kansas	State	48.8	Aguirre, (Belmont, Los Angeles, Calif.)	Northern League Finals	13-83/8
City, Mo.) Boeckler (Wilson, Long Beach,	So. Section Semi-Fin	als 48.8	Helms (El Dorado, Placerville, Calif.)		13-7
Calif.) Covey (Ames, Iowa)	State	48.8	Harris (Baton Rouge, La.)	State	13-7
Lundell (North Side, Fort Wayne, Ind.)	Inter-Conference	48.8	Johnson (Glendale, Calif.)		13-6 3/4
	_		Hendrix (Riverdale, Calif.)	State Lagrana Inv	13-6
880-Yard			Arevalos (Laguna Beach, Calif.) Wadsworth (Coral Gables, Fla.)	Laguna Inv. State	13-51/2
Cerveney (Mission Bay, San Diego, Calif.)	State Meet	1:52.7	High Ju		
Maloney (Merced, Calif.)	Central Section Finals	1:53.7	Wyborney (Port Angeles,		
Knocke (Narbonne, Lomita,	City (Los Angeles)	1:54.4	Wash.) Avant (Hart, Newhall, Calif.)	State State	6-8 3/16 6-8
Calif.)	e	1.888	Johnson (Mishawaka, Ind.)	Hoosier H.S. Relay	
Paranya (Lexington, Mass.) Rodriguez (Oxnard, Calif.)	State So. Section	1:55.5	Roenicke (San Jacinto, Calif.)	So. Section Finals	6-6
tioning (common commy	Semi-Finals	1:55.6	Sampson (San Bernardino, Calif.)	So. Section Finals	6-6
Ray (Lick, San Jose, Calif.)	No. Coast Finals	1:55.7	Skadland (Minot, N. Dak.)	State	. 6-6
Snyder (Morningside, Ingle- wood, Calif.)	So. Section Semi-Finals	1:55.7	Smith (Washington, Penna.)	State	6-5 7/8
Geist (North Side, Fort Wayne, Ind.)		1:56.4	Palmer (Arlington Heights, III.)	State	6-51/4
Menchaca (Lanier, San	San Antonio			All-City Meet	6-5
Antonio, Texas.)	Metro Relays	1:56.6	Calif.) Hinton (Cuney, Texas)	State	6-5
Havchton (Riordan, San Francisco, Calif.)	No. Coast Sectional	1:56.7	Love (Elsinore, Calif.)	Laguna Inv.	6-5
		1.00.7		State	6-4 7/8
Mile R			bridge Mass	State	6-4 7/8
Roelen (San Fernando, Calif.)	State So. Section	4:20.2	,		7
McGowan (Morningside, Ingle- wood, Calif.)	So. Section Semi-Finals	4:21.9	Broad Ju	imp	04.00
Covington (Compton, Calif.)	Compton Cup	4:22.9	Jackson (Fremont, Los Angeles, Calif.)	so. League Finals	24-814
Lopez (El Rancho, Rivera, Calif.)	San Gabriel League	4:23.5	Burton (Washington, San Fran- cisco, Calif.)	City Finals	24-71/4
Mills (Haskell, Lawrence, Kans.)	State	4:23.9	(Continued on	page 34)	

Compiled by WILLIAM W. RUSSELL

More Record-Breaking Performances Have Been Set Off Arnett Blocks Than Any Other Blocks in the World

Some World Records made with use of Arnett Starting Blocks

Event	Time	Athlete	Where Made	Date
100 Yd.	Dash 9.3	Melvin Patton	Fresno, Calif	5/15/48
100 Yd.	Dash 9.3	James J. Golliday	Evanston, III.	5/14/55
220 Yd.	Dash	Melvin Patton	Los Angeles, Calif.	5/7/49
120 Yd.	Н. Н	Richard Attlesey	Fresno, Calif.	.5/15/50
220 Yd.	L. H	Harrison Dillard	Salt Lake City	6/21/47
440 Yd.	Run 46.0	Herbert McKenley	Berkeley, Calif.	6/5/48

Olympic marks made at Melbourne with use of Arnett Blocks

Event	Time	Athlete	Event	Time	Event
400 Meter Hurdles	50.1*	Glen Davis	400 Meter Relay	39.5*	Baker, King,
800 Meter Run	1.47.7*	Tom Courtney			Murchison and
400 Meter Run	46.7	Charlie Jenkins			Morrow
100 Meter Dash	10.5	Bobby Morrow	110 Meter Hurdles	13.5*	Lee Calhoun
200 Meter Dash	20.6*	Bobby Morrow	1600 Meter Relay	3.04.8	Jenkins, Jones,
					Mashburn and
*Olympic Record					Courtney

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Coan (Pasadena, Texas) Minter (Stamford, Texas)	State State	24-4 24-3 3/4	Conner (Hayden, Topeka, Kans.) Ireland (Township, Manheim,		202-8 195-5
McClellan (Stamford, Texas)	State	23-11 3/4	Penna.)	_	
Griffin (Centennial, Compton,	Compton Cup	23-111/2	Schwab (Patton Point, Penna.)		193-53/8
Calif.)			Christian (Eagle Point, Ore.)		191-21/2
Hayes (Lincoln, San Diego, Calif.)	So. Section Finals	23-11	McKenzie (Tatum, N. Mex.)	Fox Relays	187-11
Andrews (Polytechnic, Long	So. Section Semi-		880-Yard	Relay	
Beach, Calif.)	Finals	23-10	Berkeley, Calif.	State	1:27.0
			Centennial (Compton, Calif.)	So. Section Semi-	
Shot 1	Put		(estiplies)	Finals	1:27.1
Branson (Pasadena, Calif.)	State	64-0 3/4	San Diego, Calif.	State	1:27.2
McKeever (Mt. Carmel, Los	So. Section Prelin	n. 62-43/8	Chaffey (Ontario, Calif.)	So. Section Finals	1:27.3
Angeles, Calif.)			Polytechnic (Long Beach,	So. Section Finals	1:27.3
Wade (Grossmont, Calif.)	So. Section Finals	61-5 7/8	Calif.)	oo, occion imas	B + 4m F + 10.5
Lewis (Lincoln, San Francisco, Calif.)	El Cerrito Relays	61-2	Manual Arts (Los Angeles, Calif.)	State Meet	1:27.3
Buchanan (Moxee, Wash.)	State	60-7	Fremont (Los Angeles, Calif.)	State Meet	1:28.0
Smith (Polytechnic, Long	Compton Cup	60-5	Wilson (Long Beach, Calif.)	So. Section Semi-	114010
Beach, Calif.)			Triban (Esting Death, Culti)	Finals	1:28.4
Long, (North, Phoenix, Ariz.)	State	59-111/2		Tillais	1.40.1
Verdon (Hoover, San Diego,	So. Section Semi-		Mile R	alav	
Calif.)	Finals	59-101/2			0.100
Bono (Technical, Boston, Mass.)	State	59-9 3/4	Fort Wayne, Ind.	Inter-Conference	3:19.0
Jekkals (Cuyahoga Falls, Ohio)		59-93/8	Wilson (Long Beach, Calif.)	Wilson Relays	3:20.2
McKeever (Mt. Carmel, Los Angeles, Calif.)	So. Section Finals	59-7	Lower Merion (Ardmore, Penna.)	State	3:20.8
Nutting (Northside, Atlanta,	State	59.61/2	Ames, Iowa	State	3:21.3
Ga.)		000/6	San Angelo, Texas	Texas Relays	3:22.0
,			McKinley (Washington, D. C.)		3:22.6
Discus T	hrow		Brownwood, Texas	State	3:22.6
Fields (Parkersburg, W. Va.)	State	175	Chicago Heights, Ill.	State	3:22.8
Cotterman (Mentor, Ohio)	State	174-41/4	Pasadena, Texas	Texas Relays	3:22.8
Bell (Alemeda, Calif.)		173-2 3/4			
Lewis (Lincoln, San Francisco,		171-1 3/4	440-Yard	Relay	
Calif.)	State	111-1 3/4	San Angelo, Texas	Texas Relays	42.8
Vernon (Oberlin, Kans.)	State	169-10	Travis (Austin, Texas)	Texas Relays	42.8
Tayrien (Odessa, Texas)	Dallas Inv.	169-41/8	Baytown, Texas	Regional	42.9
Morris (Littlefield, Texas)	West Texas Relays		Byrd, La.	Northwest Relays	43.0
storiis (Littleffeld, Texas)	west Texas Relay	100-11	Pasadena, Texas	Royal Purple Relays	
Javelin T	brow		Highland (Albuquerque,	State Prelim.	43.2
Sikorsky (Mt. Pleasant, Penna.)		22-10 3/4	N. Mex.)	State Fieldi.	10.4
Kovalkides (Princeton, N. J.)	State	211-85/8	Las Vegas, Nev.	State	43.4
BUTGIBLIUS (IIIIIICUII, N. I.)	STREE	all-078	Las regas, Arev.	State	7.7.1

Twelfth Annual

Report on High School Track

In the early spring of 1947 we presented our first review of track in the high schools. In order to add interest to the statistics, points were assigned for the best times and distances. These were based on the NCAA point system of 10 points for first place with 8, 6, 4, 2, and 1 awarded for the next five places.

In the write-up of the first review, and in each subsequent report on track in the high schools, we have cautioned the reader against placing too much emphasis upon the point score. There are too many variables involved such as varying track conditions, varying weather conditions, and varying climatic conditions to consider this material in any light other than merely interesting statistics.

In the chart on the following pages we have listed the winning time or distance for the various state high school meets which were held in the spring of 1957. The star indicates a new state record, while a solid block indicates the best performance for the event. In the case of the 220-yard dash, Louisiana and Ohio tied with the best performances, hence diagonal blocks were used. The total number of points earned by each state is shown as well as the position of each state. The latter is shown in color and is the figure in parenthesis.

California First Again

California continues to be the dominant track state. This year marks the tenth time out of twelve that it has been first. On the other two occasions Texas had the distinction of being the leading high school track state. On two previous occasions California scored 106 points, and its total this year was only 2 points less than the previous high. However, California's winning margin of 61 points over second place, Louisiana, surpassed the 60-point margin it held over Illinois last year. California scored in every event in which it competed, and throughout the history of this study has scored in 131 out of a possible 147 events.

The Top Ten

In addition to California, the *Top Ten* this year are Arizona, Illinois, Kansas, Louisiana, New York, Ohio, Pennsylvania, Texas, and Washington. Michigan and Iowa failed to score, and Missouri was 8 points shy of having enough points to rank among the elive. Their places were

(Write-up continued on page 38)

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FEATURING:

- T-Shirts in white and colors.
- · Gym Pants in white and colors with our exclusive triple stitched Boxer style elastic waist that's specially treated to be heat resistant.
- Your school design processed in your own school color on both shirt and pant.
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T-Shirt: Style 78QS. White.

Gym Pant: Style KE/8. In following colors-all stocked for immediate delivery: Dk. Green, Kelly, Navy, Royal, Maroon, Scarlet, Cardinal, Orange, Purple, Brown, Gray, Black, Gold. Full elastic waist. Sizes: XS-S-M-L. Complete Price, including shirt and pants processed in your own school color with your own design

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Gym Pant: Style KE/8.

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for January, 1958

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Track in the High Schools

STATE	120 HIGH HURDLES	100 DASH	MILE	880 RELAY	440	180 LOWS	880	220 DASH	MILE	POLE	SHOT	HIGH	DISCUS	BROAD	JAVELIN (b)	TOTAL
ALA.	15.3	10.4	4:33.2		52.3	20.3	2:04.2	22.4	3:31.8	*12-434	48-13/4	[*] 6-0½	140.9	21.43/4		
ARIZ.	15.4	10.1	4:34.2	1:30.7	50.4	20.3	2:01.3	22.6		14.69	\$9.111/2	₹/0-9	161-101/2	22-81/4		16
ARK.	15.5	10.1	4:45.7	1:32.9	1 49.1	9.61	2:01.1	22.4	3:29.2	*12-01/8	\$21-8	6-034	145-41/2	★ 22-81/8		1 (25)
CALIF.	14.3	9.6	102:4	97691		1	*	21.3		13-6	64.0%	8 8-9	173-234	23-81/2		104
.0100	14.8	¢ 9.9	4:42.8	1:31.1	* 49.2	20.2	2:02.3	22.5	3:30.9	12	54-21/2	6-47/8	157-81/4	22.91/2		1/2 (27)
CONN.	* 14.9	10.0	4:34.6	*1:30.7	50.9	19.8	*1.55.7	21.8		9-11-€	*56-01/2	2-10	148-10	21	200-1	9
DEI.	No Sta	No State Meet														
D. C.	15.5	10.2	4:38.6	1:30.3	50.3	20.7	1:59.6	22.9	3:22.6	11.2	51.9	1-9	144-51/2	21.1		10
FLA.	14.3	10.0	* 4:36.2	* 1:30.4	51.4	19.7	2:00.8	22.4	3:30.8	$*^{13.2}$	*55	6-13/4	157-13/4	22-71/4		10
GA.	15.7	10.1	4:46		* 49.5	20.9	2:00.4	22.2	*3:33.8	12.2	* 29-6½	1-9	9-191	20-6	167-6	-
ОНРО	15.7	* 23% 9.8	* 4:29	* 1:32.5	50.4	★ 20.3	1:59.5	22.8	3:35.4	* 12-31/4	* 52-8%	5-1178	* 160-2½	21-2		2% (21)
II.	14.7	10.0	4:27.2	1:30.8	48.9	19.3	1:59.4	21.9	3:22.8	12.2	*58-31/2	*6-51/4	159-3%	22-63/8		13
IND.	15.0	6.6	4:25.3	1:31.4	49.9	19.9	1:59.4	22.1	$\frac{1}{3:25.0}$	12-71/2	54-41/2	8/1-9		22-0%		NO.
IOWA	15.0	10.1	4:30	1:31.4	49.4	20.7	1:58.8	22.6	3:26.6	12-33/4	55-111/4	6-11%	155	22-01/2		
KANS.	14.5	10.1	★ 4:23.9		50.3	19.4	1:58.0	21.5	3:26.1	12-51/2	54-37/8	6-11/2	* 4 169.10	23.2	202-8	18
KY.	16.1	10.2	4:37.5	1:32.8	51.9	20.8	2:03.5	22.1	3:35.4	9-11	49-81/4	5-9	145-103/4	20-11		
FA.	* 14.2	*	4:32.5	$^{*}_{1:29.3}$	49.5	19.8	★1:58.5	Ti I	3:27.6	*13.7	51-2%	6-03/4	149-111/2	21.9%	7-181	43
MAINE	15.3	10.4	* 4:31.9	1:37.6	52.8	★ 20.6	2:02.4	22.4		9-01	46-101/2	5.101/2	145-11/4	21.31/2	166-8	
MD.		₩ 10.0	4:39.9	1:33.2	51.7		2:04.8	22.3	*3.33.0	11.4	47-13/4	5.111/2	144-4	20.10%		
MASS.	15.2	10.2	4:29.5	j :32.0	20.6	* 19.7	* 1:55.5	22.2		11-8/4	* 4 59.93⁄4	* 6-47's	T47-434	22-63/4	172-71/4	121/2
MICH.	12.1	10.3	4:37.3	1:33.5	51.2	20.1	2:03.0	22.7		12-1	54-01/2	6-1		21-83/4		
MINN.	* 14.6	10.3	4:28.7	* 1.31.3	50.7	20.3	1:58.7	22.0		6-11	\$56-71/2	*6-2%	152-1	22.91/		
wo.	10.0	10.0	4145.6	41.634.0	52.1	19.81	*2:07.0	23.1	3.27.2	-	47.415	25-10 P.Q.	127-414	20-475		
MONT.	15.5	10.0	4:33.4	* 1:31.2	* 49.	20.0	2:00.2	22.1		12-4	50-11%	3-11	150-1	21.8	22.0	6

	MICH	15.1	10.3	4:37.3	1:33.5	21.2	1.02	2:03:0	9 1000									ı
15.2 9.9 4.28.1 1.32.6 50.6 20.5 2.02.0 2.2.1 15.2 9.9 4.28.1 1.32.6 50.6 20.5 2.02.0 2.2.2 15.3 9.3 4.59.3 1.33.0 51.8 4.99.9 2.04.2 4.21.4 15.4 9.9 4.427.3 1.33.0 51.8 4.99.3 2.04.2 4.21.4 15.4 10.0 4.27.3 1.38.1 49.6 4.99.3 1.58.6 15.4 10.0 4.27.3 1.31.4 49.6 4.93.4 1.58.6 21.0 15.4 10.0 4.37.3 4.13.5 4.99.8 4.19.5 2.04.5 2.04.5 15.4 10.0 4.37.3 4.13.5 4.90.8 4.19.5 2.04.5 2.04.5 15.4 10.0 4.37.3 4.13.5 4.90.8 4.19.5 2.04.5 2.04.5 15.5 10.0 4.43.5 1.30.8 4.48.6 19.3 1.59.5 2.04.5 15.6 10.1 4.38.2 1.33.8 4.38.6 19.3 1.59.5 2.04.3 15.7 10.0 4.42.5 1.33.8 4.48.6 19.3 1.59.5 2.04.3 15.8 10.0 4.42.5 1.33.8 51.3 20.5 2.02.7 2.02.1 15.8 10.0 4.42.5 1.33.8 51.3 20.5 2.02.7 2.04.1 15.8 10.0 4.42.5 1.33.8 51.3 20.5 2.04.0 2.04.0 15.8 10.1 4.48.5 1.33.8 51.3 20.5 2.04.0 2.04.0 15.8 10.1 4.48.5 1.33.8 51.3 20.5 2.04.0 2.04.0 15.8 10.1 4.40.1 3.3.6 3.0 3.0 3.0 3.0 3.0 15.8 10.1 4.49.0 1.32.5 50.1 4.9.8 4.15.6 2.04.0 2.04.0 15.8 10.1 4.20.3 1.31.2 49.7 19.8 2.04.0 2.04.0 2.04.0 15.8 10.1 4.40.1 1.34.8 53.3 20.9 2.05.4 2.03.0 15.8 10.1 5.01.1 1.34.8 53.3 20.9 2.03.5 2.03.0 15.8 10.1 5.01.1 1.34.8 53.3 20.9 2.03.5 2.03.0 15.8 10.1 5.01.1 1.34.8 53.3 20.3 2.03.5 2.03.5 2.03.0 15.8 10.1 5.01.1 1.34.8 53.3 20.9 2.03.5 2.03.0 15.8 10.1 5.01.1 1.34.8 53.3 20.9 2.03.5 2.03.0 15.8 10.1 5.01.1 1.34.8 53.3 20.9 2.03.5 2.03.0 15.8 10.1 5.01.1 1.34.8 51.3 2.03.3 2.03.3 2.03.3 2.03.3 2.03.3 15.8 10.1 5.01.1 1.34.8 51.3 21.3 2.03.3 2.03.3 2.03.3 15.8 10.1 5.01.1 1.34.8 51.3 21.3 2.03.3 2.03.3 2.				4,28.7	4		20.3	1:58.7	22.9		6-11	*56-7½	*6-2%	152-1	22.91/4			-
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15.3 9.2° 41.59.3 1.33.0 51.8 $^{\circ}$ 19.8 2.04.2 $^{\circ}$ 21.7 15.8 15.9 1.38.0 1.38.0 1.38.0 21.4 1.38.0 1.38.0 1.38.0 21.4 21.4 21.4 21.6 21.4 21.4 21.6 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.3 21.6 21.6 21.3 21.6 21.6 21.3 21.6 21.6 21.3 21.6 21.	NEBR.	15.			1:32.6	50.6	20.5	2:02.0	22.2	3:31.1	12-6/2	57-43/4	5-111/2	156-11/4	22-01/2			
16.2 16.6 4:38.7 1:38.1 52.4 22.4 2:05.5 23.6 15.0 10.0 4:27.3 1:38.1 $\frac{4}{48.3}$ 19.9 1:58.0 21.9 15.0 10.0 4:27.3 1:30.1 $\frac{4}{48.3}$ $\frac{1}{4}.9$	NEV.	15.3			1:33.0		₩ 19.8	2:04.2	6.1		11.11	9-12	6-2	143-0%	20-10%		31/10	(23)
15.0 10.0 4:27.3 $\frac{4}{4} + 48.3 $ 19.9 1:58.0 21.9 15.1 $\frac{1}{4} + 9.9 $ 4:36.5 1:30.1 $\frac{1}{4} + 9.8 $ 19.9 1:58.0 21.9 15.1 $\frac{2.3}{4} + 9.28 $ 4:25.2 1:31.4 49.6 $\frac{1}{4} + 9.3 $ 1:56.9 21.0 15.4 10.0 4:37.3 $\frac{1}{4} + 3.9 $ 20.4 2:01 22.5 15.4 10.0 4:37.3 $\frac{1}{4} + 3.9 $ 20.4 2:01 22.5 15.4 10.0 4:37.3 $\frac{1}{4} + 3.9 $ 20.2 2:02.7 22.2 15.5 10.1 4:28.1 1:31.9 50.9 20.2 2:02.7 22.2 15.7 10.3 4:27.1 1:31.5 50.9 20.2 2:04.3 $\frac{1}{4} + 2.9 $ 1:59.2 2:04.3 15.4 10.0 4:35.7 1:32.5 51.7 20.3 $\frac{1}{4} + 2.0 $ 2:06.0 2:0.1 15.5 10.0 4:35.7 1:32.5 51.7 20.3 $\frac{1}{4} + 2.0 $ 2:06.0 2:0.1 15.6 10.1 4:28.1 1:32.5 52.1 $\frac{1}{4} + 2.0 $ 1:57.6 2:1.5 15.6 10.4 4:40.1 2:3.0 $\frac{1}{4} + 0.3 $ 1:59.2 2:04.0 15.6 10.1 4:28.2 2:3.0 $\frac{1}{4} + 0.3 $ 1:59.2 2:04.0 2:2.7 15.6 10.1 4:20.2 3:3.0 $\frac{1}{4} + 0.3 $ 1:59.2 2:04.0 2:04.0 15.6 10.1 4:20.2 3:3.0 $\frac{1}{4} + 0.3 $ 1:59.2 2:04.0 2:04.0 15.6 10.2 4:40.1 3:3.5 5.0.1 3:0.3 2:04.0 2:04.0 2:04.0 15.1 10.1 4:20.2 3:3.5 3:0.3 2:04.0 2:04.0 2:04.0 15.8 10.1 4:40.1 3:3.5 5:0.4 3:0.3 2:04.0 2:04.0 2:04.0 15.1 10.2 4:40.0 4:32.5 5:0.6 2:0.1 2:01.5 2:04.0 15.8 10.1 5:01.1 1:34.8 53.3 2:0.3 2:04.0 2:03.0 15.8 10.1 5:01.1 1:34.8 53.3 2:03.9 2:03.9 2:03.0 15.8 10.1 5:01.1 1:34.8 53.3 2:03.9 2:03.9 2:03.0 15.8 10.1 5:01.1 1:34.8 2:1.3 2:03.9 2:03.0 15.8 10.1 5:01.1 1:34.8 2:1.3 2:03.9 2:03.9 2:03.0 15.8 10.1 5:01.1 1:34.8 2:1.3 2:03.9 2:03.9 2:03.9 15.8 10.1 1:34.8 2:1.3 2:03.9 2:03.9 2:03.0 15.8 10.1 10.1 1:34.8 2:1.3 2:03.9 2:03.0 2:03.0 2:03.0 15.8 10.1 1:34.8 2:1.3 2:03.0 2:03.0	Ä.	16.2		4:38.7		52.4	22.4	2:05.5			11.71/8	49-83/4	5-7	153	20-53/4	172-13/4		
EX. \uparrow 14.6 \uparrow 9.9 4:36.5 1:30.1 \uparrow 49.8 \uparrow 19.5 \uparrow 19.6 \uparrow 19.5 \downarrow 13.1 15.1 \uparrow 9.8 4:25.2 1:31.4 49.6 \uparrow 19.3 1:56.4 21.0 15.1 \uparrow 10.1 4:37.3 \uparrow 1:34.5 \uparrow 50.8 21.2 \uparrow 1:56.9 21.0 14.5 9.8 4:31.5 1:29.6 49.6 19.2 2:01.3 22.7 14.5 9.8 4:31.5 1:39.6 49.6 19.2 2:01.3 22.2 15.0 10.1 4:31.5 1:31.9 50.9 20.2 2:01.3 22.2 15.0 10.1 4:31.5 1:31.9 50.9 20.2 2:01.1 22.2 15.7 10.0 4:42.7 1:31.5 50.7 20.3 2:01.1 22.9 15.5 10.0 4:42.6 1:32.5 52.1 \uparrow 10.3 2:02.7 2:02.4 15.5 10.0 4:42.6 1:32.5 52.1 \uparrow	N. J.	15.0		4:27.3		48.	19.9	1:58.0			12	\$7-514	1-9	154-11/4	21-81/4	211-8%	81/2	(13)
15.1 \star 0.8% 4.25.6 1.31.4 49.6 \star 19.3 4 1.56.9 21.0 15.1 \star 10.1 4.34.0 20.7 20.4 2.01 22.5 15.4 10.0 4.37.3 \star 1.34.5 \star 50.8 21.2 \star 1.56.9 22.7 14.5 9.8 4.31.5 1.29.5 49.6 19.2 2.01.3 22.2 15.0 10.1 4.28.1 1.31.9 50.9 20.2 2.02.7 22.2 15.1 10.0 4.42.7 1.31.5 50.7 20.3 \star 2.04.3 \star 2.20.1 15.2 10.0 4.42.7 1.34.5 52.4 \star 20.4 2.06.0 2.04.3 15.3 \star 10.0 4.42.7 1.32.5 51.7 20.3 \star 2.06.2 2.04.3 15.4 10.0 4.42.7 1.32.5 51.7 20.3 \star 2.06.0 2.2.4 15.5 10.0 4.42.5 1.32.5 51.7 20.3 \star 2.06.0 2.2.4 14.8 9.9 \star 4.40.1 33.0 33.0 20.6 2.04.0 2.2.7 15.1 10.1 4.29.0 1.31.2 49.7 19.8 2.01.0 2.01.5 15.3 10.1 4.29.0 1.31.2 49.7 19.8 2.01.0 2.02.7 15.4 10.2 4.44.0 \star 1.34.8 51.3 20.9 2.05.4 2.02.7 15.8 10.1 5.01.1 1.34.8 51.3 20.9 2.05.4 2.32.2 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.03.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.03.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 23.0 Nermont runs the 200 yard lows.	N. MEX.		*	4:36.5		*		2:04.5		3:28.6	12.1	52-3	6-21/4	160-31/2	21-85/8	179-23/4	7	100
15.1 \star 10.1 4.34.0 50.7 20.4 2.01 22.5 15.4 10.0 4.37.3 \star 1.34.5 \star 50.8 21.2 \star 1.59.5 22.7 15.4 10.0 4.31.5 1.29.5 49.6 19.2 \star 2.01.3 22.2 15.0 10.1 4.28.1 1.31.9 50.9 20.2 2.02.7 22.2 15.0 10.1 4.28.1 1.31.5 51.0 20.6 2.01.1 22.9 \star 15.3 \star 10.0 4.41.0 \star 1.34.5 52.4 \star 20.4 2.06.0 23.0 15.5 10.0 4.38.2 1.33.8 51.3 20.5 2.02.7 22.9 15.5 10.0 4.38.2 1.32.5 51.7 20.3 \star 20.6 2.30.0 15.5 10.1 4.38.2 1.32.5 51.7 20.3 \star 20.6 2.30.0 14.4 \star 9.9 4.38.9 1.32.5 52.1 \star 19.6 1.57.6 21.5 15.1 10.1 4.29.0 1.31.2 49.7 19.8 \star 2.01.9 2.01.0 15.1 10.2 4.44.0 \star 1.34.5 50.6 20.1 2.01.5 22.2 15.1 10.2 4.44.0 \star 1.34.8 51.5 21.3 2.03.9 2.05.4 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 10.1 5.01.1 1.34.8 51.5 21.3 2.03.9 2.30.0 15.8 15.8 15.8 15.8 15.8 2.01.0 2.05.4 2.30.0 15.8 15.8 15.8 15.8 15.8 2.01.0 2.05.4 2.30.0 15.8 15.8 15.8 15.8 15.8 2.01.0 2.05.4 2.30.0 15.8 15.8 15.8 15.8 15.8 2.01.0 2.05.4 2.30.0 15.8 15.8 15.8 15.8 15.8 2.01.0 2.05.4 2.30.0 15	N. Y.					49.6		1:56.9	21.0	3:43.2	12.2	56-21/2	6-03/4	163-7			25%	1 8
15.4 10.0 4:37.3 \times 1:34.5 \times 50.8 21.2 \times 1:59.5 22.7 14.5 9.8 4:31.5 1:29.5 49.6 19.2 2:01.3 15.0 10.1 4:28.1 1:31.9 50.9 20.2 2:02.7 22.2 15.0 10.1 4:28.1 1:31.5 51.0 20.6 2:01.1 22.9 15.1 10.0 4:41.0 4:30.5 1:30.8 \times 48.6 19.3 1:59.2 21.8 15.2 10.0 4:42.7 1:33.8 51.3 20.5 2:04.3 \times 22.5 15.3 \times 10.0 4:36.7 1:32.5 52.1 \times 20.3 \times 20.0 23.0 15.5 10.0 4:36.7 1:32.5 51.7 20.3 \times 20.0 22.0 15.6 10.4 4:40.1 23.5 53.0 20.6 2:04.0 22.7 15.1 10.1 4:29.0 1:31.2 49.7 19.8 \times 1:50.2 \times 21.8 15.1 10.2 4:39.5 1:34.8 53.3 20.9 2:05.4 23.0 15.1 10.2 4:39.5 1:34.8 53.3 20.9 2:05.4 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 2:05.4 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 Vermont runs the 200 yard lows.		15.1	*	4:34.0		50.7	20.4	2:01	22.5	*3:29.4	*12-1	50-5	5-2	139-11	21-8			
14.5 9.8 4:31.5 1:29.5 49.6 19.2 2:01.3 2.04 15.0 10.1 4:28.1 1:31.9 50.9 20.2 2:02.7 22.2 15.1 10.3 4:27.1 1:31.5 51.0 20.6 2:01.1 22.9 15.2 10.0 4:42.7 1:34.5 50.7 \cdot 20.3 2:04.3 \times 22.5 15.3 \times 10.0 4:42.7 1:34.5 50.7 \cdot 20.3 2:04.3 \times 22.5 15.3 \times 10.0 4:42.7 1:34.5 52.4 \times 20.4 2:06.0 23.0 15.3 10.1 4:38.2 1:32.5 51.3 20.5 2:02.7 22.9 15.5 10.0 4:36.2 1:32.5 50.0 19.6 1:57.6 21.5 15.6 10.4 4:40.1 23.0 \times 10.6 1:57.6 2:04.0 2.07.1 \times 14.4 \times 9.9 \times 4:32.5 50.8 19.6 1:57.6 21.8 \times 14.4 \times 9.9 \times 4:32.5 50.8 19.6 1:50.2 \times 21.4 \times 15.1 10.1 4:29.0 1:31.2 49.7 19.8 2:01.0 2:01.5 \times 15.1 10.2 4:39.5 1:34.8 53.3 20.9 2:05.4 23.0 \times 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 Nermont runs the 200 yard lows.	N. O.	15.4			-		21.2	*1:59.5			10-8	50-10	9-9	141-3	21-11	163-3	9	(17)
15.0 10.1 4:28.1 1:31.9 50.9 20.2 2:02.7 22.2 15.7 10.3 4:27.1 1:31.5 51.0 20.6 2:01.1 22.9 $\stackrel{\times}{}$ 15.3 $\stackrel{\times}{}$ 10.0 4:30.5 1:30.8 $\stackrel{\times}{}$ 48.6 19.3 1:59.2 21.8 15.4 10.0 4:41.0 1:34.5 52.4 $\stackrel{\times}{}$ 20.4 2:06.0 23.0 15.5 10.0 4:35.7 1:32.5 51.7 20.3 $\stackrel{\times}{}$ 20.6 2:02.7 15.5 10.0 4:36.2 1:32.5 51.7 20.3 $\stackrel{\times}{}$ 20.6 22.7 15.6 10.4 4:40.1 23.0 20.6 2:04.0 22.7 $\stackrel{\times}{}$ 15.1 10.1 4:29.0 1:31.2 49.7 19.8 2:01.0 21.8 15.1 10.2 4:44.0 $\stackrel{\times}{}$ 1:32.5 50.0 20.1 2:01.5 22.2 15.8 10.1 5:01.1 1:34.8 53.3 20.9 2:05.4 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 1:34.8 51.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 1:34.8 51.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 1:34.8 51.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 1:34.8 21.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 1:34.8 21.5 21.3 2:03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 2.01.5 2.03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 2.01.5 2.03.9 23.0 $\stackrel{\times}{}$ 15.8 10.1 2.01.5 2.03.9 23.0 $\stackrel{\times}{}$ 15.8 2.01.9 2.03.9 23.0	ОНЮ	14.5					19.2	2:01.3		3:24.6	12.9	\$59-93%	6-1	174-41/4	22-13/4		381/10	(3)
15.7 10.3 4:27.1 1:31.5 51.0 20.6 2:01.1 22.9	OKLA.	15.0		4:28.1		50.9	20.5	2:02.7	22.2	3:25.4	12-2	51-101/2	6-2%	151-31/2	21.101/2			
10.0 4:30.5 1:30.8 48.6 19.3 1:59.2 21.8 15.4 10.0 4:42.7 1:34.5 52.4	ORE.	15.7		4:27.1			20.6	2:01.1	22.9		12-41/4	57-61/4	5-11	159-81/2		191-21/2	9	(17)
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	PA.	*	10.0	4:30.5		× 48.6	19.3	1:59.2	21.8	*	12-11	56-5	*6-57/8	8/26-091	22-0/2	201-2%	55	3
15.4 10.0 4:42.7 1:34.5 52.4 4 20.4 2:06.0 23.0 15.3 10.1 4.38.2 1:33.8 51.3 20.5 2:02.7 22.9 15.5 10.0 4:35.7 1:32.5 51.7 20.3 4 2:00.2 22.4 14.7 9.8 4:26.5 52.1 4 19.8 4 1:57.6 21.5 14.8 9.9 4:38.9 1:32.5 52.1 4 19.8 4 1:58.5 4 2:16. 15.1 10.1 4:29.0 1:31.2 49.7 19.8 2:01.5 22.2 15.8 10.1 5:01.1 1:34.8 53.3 20.9 2:05.4 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 51.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 51.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 51.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 51.3 2:03.9 23.0 15.8 15.8 15.8 15.8 21.5 21.3 2:03.9 23.0 15.8 15.8 15.8 15.8 21.5 21.3 2.03.9 23.0 15.8 15.8 15.8 15.8 21.5 21.3 2.03.9 23.0 15.8 15.8 15.8 15.8 21.5 21.3 2.03.9 23.0 15.8 15.8 15.8 15.8 21.5 21.3 2.03.9 23.0 15.8 15.8 15.8 15.8 21.5 21.3			*	4:41.0		50.7	20.3	2:04.3			11.93	53-41/4	5-7%	124-11	22.634	167-101/2		
15.3 10.1 4.38.2 1:33.8 51.3 20.5 2:02.7 22.9 15.5 10.0 4:35.7 1:32.5 51.7 20.3 2 2:00.2 22.4 14.7 9.8 4:26.5 50.0 19.6 1:57.6 21.5 14.8 9.9 4:38.9 1:32.5 52.1 2 19.8 2 1:58.5 2 21.6 15.1 10.1 4:29.0 1:31.2 49.7 19.8 2:01.0 2:01.5 15.1 10.2 4:39.5 1:34.8 53.3 20.9 2:05.4 23.2 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0		15.4		4:42.7		52.		2:06.0	23.0	3:36.1	111	*50-2%	5-10	141-5	19.33/4			
15.5 10.0 4:35.7 1:32.5 51.7 20.3 4 2:00.2 22.4 14.7 29.8 4:26.5 50.0 19.6 1:57.6 21.5 14.8 9.9 4:36.9 1:32.5 52.1 4 19.8 4 1:58.5 2 21.6 15.6 10.4 4:40.1 53.0 20.6 2:04.0 22.7 4.4.4 4:26.3 50.8 19.6 1:59.2 4 21.4 15.1 10.1 4:29.0 1:31.2 49.7 19.8 2:01.0 21.8 15.1 10.2 4:39.5 1:34.8 53.3 20.9 2:05.4 23.2 15.8 10.1 5:01.1 1:34.8 51.5 21.3 2:03.9 23.0	S. D.	15.7		4.38.2		51.	20.5	2:02.7	22.9	3:32.9	11-8	20-8	2-9	158-31/2	22-11/4			
AS 147 9.8 4:26.5 50.0 19.6 1:57.6 21.5 H. 14.8 9.9 4:38.9 1:32.5 52.1 * 19.8 * 1:58.5 * 21.6 15.6	TENN.	15.5			1:32		20.3	*2:00.2		3:30.7	*12-21/4	51-4%		147-5	20-10			
H 14.8 9.9 4:38.9 1:32.5 52.1 * 19.8 * 1:58.5 * 21.6 15.6 10.4 4:40.1 53.0 20.6 2:04.0 22.7 15.6	TEXAS	14.7		-		50.0	9.61	1:57.6		3:22.8	12.9	58-7	6-11/2	166-234	×		223%	(9)
15.6 10.4 4:40.1 53.0 (a) 2:04.0 22.7 (a) 4:40.1 53.0 20.6 2:04.0 22.7 (a) 4:26.3 4:26.3 50.8 19.6 1:59.2 4:21.4 (a) 4:29.0 1:31.2 49.7 19.8 2:01.0 21.8 (a) 4:39.5 1:34.8 53.3 20.9 2:05.4 23.2 (a) 4:39.5 1:34.8 51.5 21.3 2:03.9 23.0 (a) 4:39.5 4:34.8 21.5 21.3 2:03.9 23.0 (a) 4:39.5 4:39.5 4:34.8 21.5 21.3 2:03.9 23.0 (a) 4:39.5 4:39.5 (a) 4:39.5 4:39.5 (a) 4:39.5 4:39.5 (a) 4:39.5 (a	UTAH	14.8						₹1:58.5	-14	3:31.5	12-6	50-4	9	144-9	22-83/4	183-53/		
SH. 15.4 \$\psi\$ 9.9 \$\psi\$ 44:26.3 \$\text{50.8}\$ 19.6 1:59.2 \$\psi\$ 21.4 \$\text{51.4}\$ \$\text{51.6}\$	VT.	15.6		4:40.1		53.0	(a) 20.6	2:04.0			10-6	48-101/2	5-10	133-71/2	20-81/2	159		
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taken by Arizona, New York, and Washington, Ranking this high was not a new experience for these states since Arizona has appeared twice previously, while Washington is making its fifth appearance, and New York its seventh. California and Texas have been on the select list all twelve times. Ohio has missed once and Illinois twice. Indiana was not represented the last two years and has now appeared nine times as has Pennsylvania. New York follows with seven times; and then we have Iowa, New Jersey, Kansas, and Washington with five times. Arizona, Louisiana, Michigan, Missouri, and Oregon have been among the leaders on three different occasions, while Massachusetts has been up there twice. Colorado, Connecticut, Florida, Tennessee, Utah, and Virginia have each been in the select group once.

Louisiana had an excellent season and gained 43 points through two firsts and three seconds. These 43 points put Louisiana in second place and represented a big improvement over the eighth place finish of a year ago. Ohio took over third place from Texas, and Pennsylvania moved into fourth place, a mere 3 points back. New York just missed the Top Ten a year ago, but is back in the first division. Texas slipped to sixth, Washington takes over seventh, while Kansas moved one step up the ladder to eighth. Arizona holds ninth place. Illinois dropped from second to tenth but did manage to make the Top Ten by a mere half a point over Massachusetts.

Standings

There were only two changes among the first ten in the all-time list. Pennsylvania replaced neighboring New Jersey in seventh place, and Kansas nudged her neighbor, Oklahoma, out of the tenth spot. The three Middle Atlantic states continue to improve at a rapid clip. Five years ago New York trailed Indiana by 62 points, and has reduced the lead to only 3 points. Five years ago New Jersey was in eighth place as it is this year. However, New Jersey strengthened its hold on that position from 8 points to 34. Pennsylvania has shown the greatest improvement, moving from the tenth spot five years ago to seventh this year. Its point total shows a 53 per cent increase over the total of five years ago. The statistics for the leaders follow, ranked according to their positions five years ago. The figure in parenthesis represents the percentage of increase in the total points over the past five years

as compared with the total for the first seven years of the meet: 1. California (47%); 2. Ohio (30%); 3. Texas (52%); 4. Illinois (34%); 5. Indiana (21%); 6. New York (44%); 7. Iowa (15%); 8. New Jersey (40%); 9. Oklahoma (22%); 10. Pennsylvania (53%); 11. Kansas (59%). It is easy to see that with the exception of Kansas, the Middle Western states of Ohio, Illinois, Indiana, Iowa, and Oklahoma are not keeping pace with the other leaders. The standings for the states follow. All fractions have been raised to the next highest number.

1.	Calif.	1013	23.	Fla	39
2.	Texas	527	24.	Nebr.	38
3.	Ohio	362	25.	Utah	37
4.	III	326	26.	Minn	31
5.	Ind	260	27.	N. Dak	30
6.	N. Y	257	28.	N. Mex.	28
7.	Penna.	208	29.	Mont	19
8.	N. J	192	30.	Idaho	18
9.	Iowa	158		D. C	18
10.	Kans.	143	32.	Tenn.	15
11.	Okla.	138		W. Va	15
12.	Wash	131	34.	Ark.	9
13.	Mo	116	35.	Ky	8
14.	La.	113		N. Car	8
15.	Ore	101	37.	Nev	7
16.	Ariz	97	38.	R. I	6
17.	Mass.	94	39.	Ga	5
18.	Wisc.	86		Md	3
19.	Mich.	80		S. Dak	
20.	Colo	76	42.	Ala	
	Conn		43.	Miss.	1
22.	Va	49	44.	Wyo	1/3

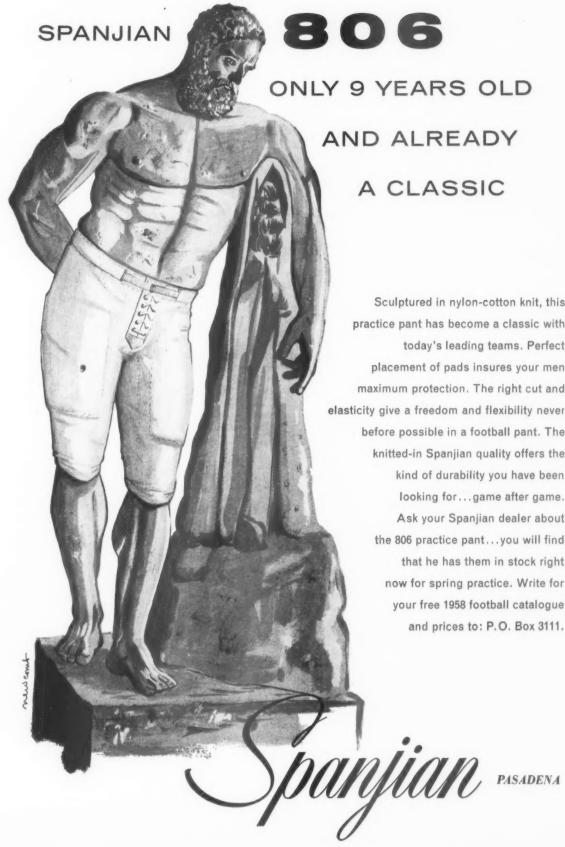
Louisiana moved up from twentieth position to a very strong fourteenth place. Wisconsin has only scored 9 points in the last five years and, as a result, has dropped from eleventh to eighteenth place. Colorado has only scored 7 points over the last five years and has gone from thirteenth to twentieth place. Among the second ten, Washington and Arizona have both improved three places over their standings of five years ago. The others in that bracket have gained or lost relatively little. Among the balance of the states, Florida has moved up five places over its standing of five years ago. The District of Columbia failed to score any points prior to 1955 and since then has scored enough to move into a tie for thirtieth position.

There were no newcomers to the list this year, and with Delaware not holding a meet, Maine, New Hampshire, Vermont, and South Carolina still remain scoreless.

Sectional Averages

Twelve years ago we grouped the states into the generally recognized sections of the country, and averaged the state totals in this manner. We

(Continued on page 65)



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Teaching the New Shot Putters

By RICHARD CALISCH

Assistant Track Coach, Maine Twp. High School, Des Plaines, Illinois

SINCE 1947 distances in the shot put event have advanced rapidly. Also, during that time great strides in the theory and mechanics of putting have been made. It is not through size alone that a man develops himself into a successful shot putter; likewise, the biggest man is not always the best in this event. Speed, agility, interest, and enthusiasm count for a great deal. These qualities are as necessary for the high school shot putter as they are for the college man.

Nowadays, the high school coach must put more effort into the selection of the boys he will teach than he did previously. Once they have been selected, he must put forth his best efforts in teaching them. Near perfect form and good conditioning must be his goal. The coach should realize that it is not just a matter of selecting the biggest freshman to put for him.

Selecting the boys is the first problem which faces the high school coach. He should look over his team, and select boys who are strong. Do not worry about their size; most of them will grow. Choose boys who have strong hands and fingers, and speed. Run them over 50 yards to see which are the fastest. Above all, select boys who are interested in shot putting. Then let them concentrate on the event. Unless these boys are needed in another event, let them stick to the shot put. Do not make the mistake of turning any boy away; let them all work out. A coach cannot always be right in his selections and some boys who do not seem to measure up at the start of the season will develop into good high school shot putters through perseverance.

When the boys have been selected, the coach should have a method of teaching this complex event which is both comprehensive and simple.

In the beginning, it is probably best to stay away from the newer or O'Brien method because the athlete cannot see where he is going, since his back is to the direction of travel. When the beginners have learned the vital fundamentals of the simpler method, they can switch easily to the more complex modern techniques. Do not allow them to try these difficult methods too early. Beginners must be drilled in the basic simple fundamentals before they can use the complex championship form successfully. Impress this point upon the new boys.

Once the group is ready to hear the magic words which will turn them into 63 footers, they should be started out in the right direction. The coach should explain the importance of endurance, speed, and strength. A daily program of chins, push-ups, sit-ups, leg lifts, weight-lifting, and running should be outlined. Beginners should not be permitted to put a shot until they have been on a good conditioning program for at least one, and possibly two weeks. When they seem to be rounding into shape, can do 5 or 10 chins, 30 or 35 push-ups, a proportionate number of sit-ups and leg lifts, and are advancing in weightlitting, then assemble them at the circle for their first lesson in the art of throwing the round iron ball.

A FTER competition at Illinois where he was an outstanding pole vaulter, Dick Calisch assisted at Maryland and then served in the marine corps where he was track coach at Camp Le Jeune. He accepted his present position as head cross-country and assistant track coach a year ago.

For the sake of convenience, teaching can be divided into three phases: the preliminary stage, the standing throw, and the complete put. Let us take them up one at a time.

The preliminary stage involves those first few days of learning, and should include a great deal of watching. Have the new putters spend some time each day watching the more experienced members of the team. They can absorb a good deal from this period of observation, and will gain a concept of the whole action which they will be breaking down in practice. They should study movies, loop films, and slides. Let the boys pick up and handle the shots; allow them to put with no instructions from the coach. A little putting will tell the coach what he wants to know. The coach should notice which boys are getting good distance without knowing quite what they are doing. These boys need work on form. Boys who have natural form or who have had previous instruction will require emphasis on strength and speed. In the case of boys who have particular form faults and generally good overall form, the coach can spend his time ironing out these faults. Left-handed boys should be observed and those who like the large iron shot rather than the more compact brass ball should be considered.

Next, the coach should start to teach the standing throw by showing the proper grip. Demonstrate both the four- and three-finger grips. Explain that athletes who have larger hands might do well to use the three-finger grip because it provides better control. Boys who have smaller hands will probably get the best results by keeping all four fingers behind the shot. In either case, the fact that the shot does not belong on the palm of the hand, but is held by the fingers, thumb, and the cushions at the base of the fingers should be stressed.

It is easy to see why shot putters need strong hands and fingers. Once the hand grip has been explained, and the way the shot is held against the neck with the elbow extended sideward has been demonstrated, let the boys put a few from a standing position. It is not necessary to use a circle. Stress that as they put, the weight of their bodies, which is well back of the rear foot at the start, is shifted forward to a point over the front foot at the finish of the put. Watch carefully and correct the following faults:

1. Improper grip—keep the shot off the palm of the hand, but do not allow the putters to balance it on their sition
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2. Elbow position—the line from the shot to the elbow along the forearm should be an extension of the line of flight of the ball as it leaves the hand. In other words, about 45 degrees is the best angle. Some boys will keep their elbows by their sides or straight out from their shoulders. A position midway between the two will be best.

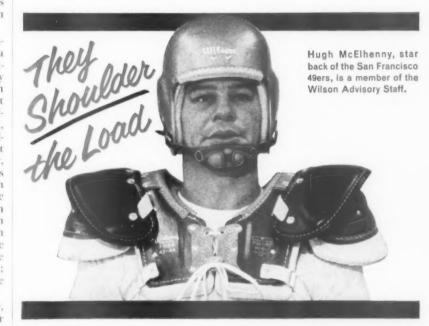
3. Head and body position—the putter's body should be kept at a 90-degree angle to the flight of the shot, until the final movements when the throw is accomplished. At this time it may come around to face the direction of the throw. At all times the athlete's head should be facing in the same direction as his body.

4. Weight change-at the beginning of the put the putter takes a position with his weight almost entirely on his rear foot. His body should be as far behind the position of his rear foot as possible without causing the putter to lose his balance. His front leg, although bent, should be extended forward for balance. As the putter propels the shot forward with his arm and shoulder, his weight shifts forward until it is taken on the front foot. The coach should instruct the putters not to use a foot switch at this time. Let them learn to push the shot not only with their arms and shoulders, but with their entire bodies and all the strength of their rear legs. Make sure they keep their weight on the ground; 12 pounds cannot be sent any distance from mid-air.

After watching the boys for awhile, the coach should start to correct their faults. He should alternate between allowing them to put while he corrects and giving them somewhat of a formal lesson in the science of putting. In these first lessons the most important points to stress are: keeping the rear foot on the ground during the put; using the weight and strength of the body to propel the shot, not just the arm and shoulder; and traveling the shot the greatest possible distance before releasing it. This last point may be accomplished by twisting the body toward the rear as the putter assumes his crouch beforc the start of the first motion, and then uncoiling upward while straightening his rear leg. This move-ment gives an upward unscrewing motion and the shot, instead of traveling straight out towards its eventual point of landing, has a slightly circular motion not unlike that of a discus while in the hand of the thrower. Therefore, the standing put is made almost entirely by forcing the body weight in an upward uncoiling motion. This method can be taught more easily by emphasizing two movements. The first is the push of the putter's body with the muscles of the rear leg sending his body forward and up as his leg unbends. This motion is a dynamic, hard, fast push with the foot and a fast contraction of the quadriceps. This push, which places the whole body behind the put, takes the burden off the putter's arm. At this point the force of the body is directed from the foot

through the knee, thigh, hip, trunk, shoulder, arm, hand, and fingers. The second motion, simultaneous with the first, is the uncoiling of the putter's arm from its bent position to an extended position at approximately 45 degrees to the horizontal, and is accompanied by a hard twist of the trunk and shoulders.

At the start of the standing put the putter's trunk is upright, his rear leg is bent, and his front leg is bent slightly and extended forward to maintain balance. His weight should be held over his rear leg. A putter's head and shoulders are at 90 degrees



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to the line of the put. The arm which is holding the shot is bent so that the shot rests in the hollow between his neck and shoulder. His elbow is extended in the same angle as the line of throw, and his trunk is coiled or turned slightly to the rear so that the shot has the greatest possible distance to travel before leaving his hand. The arm he is not using should be bent and extended in the horizontal plane. Momentum is added to the put by whipping this arm to the rear during the throw.

The coach should check this position before he permits the boys to put. At the 'finish of the standing put the body weight is on the front leg, and the body will be leaning forward, but his weight must be under control. Proper position will prevent unnecessary fouling.

When all these points have been learned and the boys are making good progress, then the coach should start to teach the glide or forward movement across the circle. The best way to teach this movement is to start at the beginning and have the experienced putters demonstrate. The newer boys can watch and talk to the older ones, thus gaining considerable knowledge in their own language. After a time the coach should step in and start the lesson.

Place the boys in the circle, or in a 7-foot circle drawn on the ground. When teaching the complete throw, a circle should be used so that the boys can begin to feel how far they have to travel. Have them take up the same position they used for the standing put, but this time they should be at the rear of the circle, and in the semi-crouched position which was described previously. The putter should take one hop and land in the center of the ring in the same position. Then he executes what we have called the standing throw; however, this time the added momentum of the forward hop is employed. Of course, the two movements must be blended smoothly, and it is probably a good idea not to spend too much time on the hop without the throw. All work should be done with the shot: 12 pounds will change the center of balance considerably.

The hop is initiated by a lateral swing of the front, or balance leg. This leg is raised once, lowered, and raised forcefully again, projecting the putter's whole body forward. At the time his front leg goes up the second time, his rear leg thrusts against the ground, sending him forward 2 to 3 feet. His rear foot remains close enough to the ground to drag the

spikes. For this reason the term hop is a misnomer; glide would be a better word. At the conclusion of the glide the putter will be in the same body position as when he started, but now he is halfway across the circle. His weight is over his rear leg which has bent to receive it; his trunk has remained upright and twisted slightly to the rear. He still holds the shot in the hollow of his neck and shoulder; the unused arm is cocked and ready to begin the vigorous twist of the shoulders which supplies much of the momentum and force behind the shot.

The momentum which was built up by the glide will not allow the putter to stop. His body will continue its forward movement even though his feet are stationary. The center of gravity will come forward rapidly, and will in its forward movement cause the center of his body to pass over his rear foot. At this point the putter uncoils. His rear leg pushes his body forward, his putting arm extends, and his shoulders and trunk twist. All of these movements must be executed simultaneously. The coach should watch for faulty timing. Not one of these movements must start before the putter has completed his glide, and one must not begin later than the other. In teaching this transition from the glide to the throw, the coach should have the boys work on the glide a few times, then the whole motion, then the throw, and finally the whole motion again. Never let them lose sight of the fact that the whole put is one continuous motion. Practice is necessary on the parts, but the beginners must never get too far from the

The most common fault in new shot putters is trying to put in midair. They tend to allow the forward momentum which was gained during the glide, and the push which was developed by the thrust of the rear leg, to carry them into the air. They complete the throw from this point. In the champions, the great speed and force developed may necessitate putting while in mid-air, but in the case of young, relatively undeveloped boys the shot should not be put in this manner. It must be put from the ground and the putter's body must have something against which to brace itself. The coach must be sure that the force developed by the putter's rear leg thrust is not wasted. He should watch the boys for this fault, and correct it immediately. Another reason this ground contact is important is that it delays

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the foot switch and keeps the center of gravity to the rear of the foul zone. The putter's rear foot must be on the ground until the ball leaves the ground; the foot switch must be the result of forward momentum, not the cause of it.

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This foot switch is an important phase of the put. The only reason for it is the maintenance of balance after the ball has left the putter's hand. It consists of bringing the rear leg up to the front one at about shoulder width, or switching the position of his feet. When he uses the latter method, the putter ends up balanced on what was his rear foot and his front foot is moving to the rear to keep the balance in that direction. It may be best to teach the putters to finish on two feet, but if they seem to finish naturally on one, they should be permitted to continue. The method that is natural for a boy is many times the best. However, the coach must be sure that the athlete does not execute the foot switch before the ball has left his hand.

Now, let us go back over the whole motion, see how it looks, and how the coach should teach it. We will assume that a right-handed putter is our sub-

The putter starts in the rear of the circle, facing 90 degrees to the right of the direction of the put and his weight is over or behind his bent right leg. His trunk is upright or nearly so and it is twisted slightly to the right to give the ball more of an arch in which to travel before it is released. His head and eves are directed to the right of the direction of the throw. The right arm is bent and held out from the body, and the forearm forms an angle of about 45 degrees to the horizontal. He holds the shot in the hollow of his neck and shoulder, and supports it on the fingers, thumb, and the cushions at the base of his fingers. His left arm is held straight out from the shoulder and is bent 90 degrees. His left leg, which is bent, extends slightly in the direction of the put for balance. Now, the putter is ready to start.

This position should be stressed, drilled, and taught. Although minor deviations may appear, the fundamentals should be observed. Most important, the coach should be sure that the boy's weight is well back over his rear leg.

The first movement is the glide to the center of the circle. It must be fast and explosive, but the body weight must remain back over the rear leg. The putter's upper body

(Concluded on page 62)



New York 11

Chicago 11

Los Angeles 11

A Jr. High School Sextathlon

By ROBERT H. McCOLLUM
Track Coach, Wilson Jr. High School, Eugene, Oregon

N this mid-century era of curriculum construction, unit outlines, and program analyses, the junior high school coach finds himself in a dilemma. There are almost no standards for measuring and comparing motor skills in the case of boys at the junior high school level.

This situation becomes perplexing, especially to the instructor who has

taught previously at the high school and/or college levels. There appear to be several reasons why few achievement standards and measuring scales do exist at the younger levels:

Track and Fi	eld	SEXTAT	HLON POINTS	J	unior High School
Shot Put	300-Yard Run	High Jump	Broad Jump	60-Yard Dash	75-Yard L.H
80 16-0	77 62.0 84 61.5	81 2-6	37 8-3 66 8-6		76 16.0
96 166	92 61.0 101 60.5		96 8-9		98 15.8
113 17-0	111 60.0 122 59.5	108 2-7			121 15.6
131 17-6	134 59.0	136 2-8	127 9-0	130 11.0	121 1).0
150 18-0	147 58.5 161 58.6	165 2-9	159 9-3	150 10.9	145 15.4
170 18-6	176 57.5			170 10.8	170 15.2
191 19-0	192 57.0	195 2-10	192 9-6	191 10.7	196 15.0
213 19-6	209 56.5 227 56.0	226 2-11	226 9-9	213 10.6	223 14.8
238 20-0	246 55.5			236 10.5	251 14.6
260 20-6	266 55.0	258 3-0	261 10-0	260 10.4	
285 21-0	287 54.5	291 3-1	297 10-3	285 10.3	280 14.4
311 21-6	309 54.0	325 3-2		311 10.2	310 14.2
338 22-0	332 53.5		334 10-6	338 10.1	341 14.0
366 22-6	356 53.0	360 3-3	372 10-9	366 10.0	373 13.8
395 23-0	381 52.5 407 52.0	396 3-4	411 11-0	395 9.9	406 13.6
425 23-6	434 51.5	433 3-5		425 9.8	440 13.4
456 24-0	462 51.0		450 11-3	456 9.7	
488 24-6	491 50.5	471 3-6	490 11-6	488 9.6	477 13.2
521 25-0	521 50.0	510 3-7	531 11-9	521 9.5	513 13.0
555 25-6	552 49.5	550 3-8	573 12-0	555 9.4	550 12.8
590 26-0	584 49.0	591 3-9		590 9.3	588 12.6
626 26-6	617 48.5	633 3-10	616 12-3	626 9.2	627 12.4
663 27-0	651 48.0	676 3-11	660 12-6	663 9.1	667 12.2
701 27-6	686 47.5 722 47.0	720 4-0	705 12-9	701 9.0	708 12.0
740 28-0	759 46.5	765 4-1	751 13-0	740 8.9	750 11.8
780 28-6	797 46.0		798 13-3	780 8.8	793 11.6
821 29-0	836 45.5	811 4-2	846 13-6	821 8.7	837 11.4
863 29-6	876 45.0	858 4-3		863 8.6	882 11.2
906 30-0	917 44.5	906 4-4	895 13-9	906 8.5	928 11.0
950 30-6	959 44.0	955 4-5	945 14-0	950 8.4	
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185 33-0	1182 41.5	2027 1 20	3030 37 0	1185 7.9	1173 10.0
235 33-6	1236 41.0	1215 4-10	1210 15-3	1235 7.8	1225 9.8
286 34-0	1285 40.5	1270 4-11	1266 15-6	1286 7.7	1278 9.6
338 34-6	1335 40.0	1326 5-0	1323 15-9	1338 7.6	1332 9.4
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1. The three-year junior high school is not accepted universally as a fundamental administrative unit.

2. There has been little demand by administrators or instructors for material and scales at this level.

3. Acceptance and use of competent scales seems more probable at the higher levels, in part because more instructors are professionally trained in physical educaton.

4. There is a great deal of disagreement regarding just what types of activities, and in what amounts, boys in this junior high school age bracket

actually need and want.

Then the problem of setting up standards for measurement at the junior high school level becomes twofold. Materials that are specifically designed for this group must be produced. These charts must be prepared so that evaluation is simple, accurate, and easy to administer and score.

During the winter of 1956-57 we undertook the construction of a track and field teaching unit for junior high school boys. A sextathlon of events was selected as follows:

1. Shot put - muscular explosive power.

2. High jump - leg spring and upward drive-lift.

3. Broad jump - leg spring and outward drive-lift.

 Sixty-yard dash – native speed.
 Seventy-five yard low hurdles – coordination and agility.

6. Three hundred vard run - endurance.

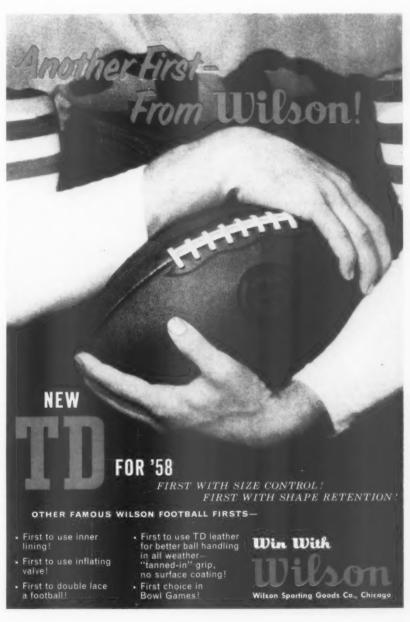
A chart was constructed for each event, with increasing point values awarded for improved performance. These charts were patterned after charts prepared several years ago by Mr. William Bowerman, track coach and assistant athletic director, University of Oregon, for the school's physical education service program.

After four weeks of class instruction and individual practice in the spring, approximately 300 boys participated

ROBERT McCOLLUM graduated from Slippery Rock Teachers College and then competed for the Berlin Germany Command. During 1955, while studying for his master's degree, he coached the University of Oregon freshman team to an undefeated season. Next he coached at Douglas High School, Dillard, Oregon. He joined the Eugene school system while working towards his doctor's degree at Oregon.

in each of the six events: 100 boys from each grade, seventh, eighth, and ninth. A boy who could not reach the minimum standards was awarded a token 100 points, if he actually put forth good effort. A total of 600 points was a passing score. After studying total scores, the sum of the six events which determined a boy's all-around ability for this unit, we concluded that body build was not the determining factor in a high total score; but in almost all cases the boys with the highest totals had been members of the interschool athletic teams throughout the school

In an effort to equalize each event with the other events, we decided to revise the point distribution statistically, in the light of the spring results. The performances of each sextathlon event were summarized into frequency distributions. Percentiles were established to discover the relative level of each achievement, as reflected by the actual class performances. In other words, we were interested in what actual achievement for one event such as the shot put was equal to, and should have the same point values as another event such as the high jump. This is the (Concluded on page 61)





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90¢ per Set

CARL H. OLSON

Box 567

Patchogue, N. Y.

Game Movies

(Continued from page 30)

or mean that a few extra reels of film can be purchased for the amount formerly spent paying the tax.

Camera speed is another item worth mentioning when discussing film costs. A game can be filmed in slow-motion at 24 or 32 frames a second. The type of projector used for analyzing the movies enters into the picture. Some coaches use the regular school projector which operates at only two speeds; 16 frames a second, silent speed, and 24 frames a second, sound speed. The coach should decide at what speed he wants the action to appear on the screen.

Action that is filmed at 32 frames a second and projected at 16 frames a second remains on the screen twice as long as it took on the field. However, silent projectors are available with a rheostat which can slow the motor to single frame projection. These can be operated at about 12 frames a second without a flicker. Movies photographed at 24 and projected at 12 frames give the same slowmotion action as the 32-16 ratio with the other type projector. Costs are reduced with the second type of projector. About 650 feet of film are necessary to shoot a game at 24 frames and 800 at 32.

When film is left in the camera, a professional touch can be added to the game movies. We use a title board which was made in the school shop. Depending on the amount of film left, titles are made showing the schools playing, date of the game, score by quarters, 'etc. These titles appear at the end of the last roll, but can be spliced into the proper place

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at a later time. This is a much better procedure than using the film taking pictures of the crowd leaving the game or just running the film out.

Some high schools use 400 or 500 feet of film for a game; others take the complete game. In the latter case, the cameraman can save some film. Many times it is possible to use a 50foot reel of film near the end of the game. If it is necessary to reload the camera late in the fourth quarter, after the officials have indicated four minutes remaining in the game, use a 50-foot roll of film. This amount will be sufficient to finish the game with little wasted film. By comparison, two 50-foot reels will cost more than one 100-foot reel. However, in certain situations, a saving can be made by using the 50-foot reel at the end of the game.

The coach must take the cameraman into his confidence in order to get the best results on the game movies. The cameraman should be told of any special plays to look for. He should also be briefed on the scouting reports about the opposing team's type of play. Thus alerted, the cameraman can follow the action much better and get it on film for the coach's use.

A valuable asset to the cameraman is his light meter. Checks should be made during the progress of the game to verify sky conditions. These frequent checks are important when shooting at the faster speeds necessary to get slow-motion action. Night games are usually filmed with the lens wide-open to f 1.5.

Choice of magnification should be left to the coach. With the camera set up on the 50-yard line, some coaches prefer a 2-inch or 50mm lens when action is between the 30-yard lines. From the goal line to the 30, the 3-inch 75mm telephoto lens is recommended. Action is farther away from the camera and extra magnification is needed to show up the faults in player assignment. On the other hand, other coaches will prefer the 2- or 3-inch lens throughout the length of the field.

Another important aspect of taking game movies is to get rapid processing of the film. The cameraman and school athletic officials should investigate how best to get the film to the laboratory and back to the coach. In order to be of value to the coach, we feel that the game movies should be in his hands by Monday afternoon, prior to the start of practice.

We hope these suggestions will be of assistance to the cameraman and to the coach.



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What the Letter Club Offers

By PHILIP S. FOX
Associate Professor of Health and Physical Education, District of Columbia
Teachers College
and
RALPH H. LANE

Assistant Professor of English, District of Columbia Teachers College

THEIR fellow students say, "They can play ball, all right, but they do not know anything, and they are always getting into trouble." Their teachers say, "Tardiness, absence, laziness, and insolence are all they have to show for team sports, which are supposed to teach character." And

the players themselves say, "What's the use? We never get an even break in the classroom. Everybody thinks we are stupid."

Yes, it is a familiar story in hundreds of high schools throughout the United States, despite the pampering which a few players enjoy. Quite

often the negative role of the athlete has grown permanent through years of misunderstanding, so that the administration expects problems in discipline, the teachers expect to squeeze the least troublesome boys through, and the community expects victories in spite of ineligibilities. An onlooker might athle voted He athle

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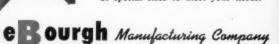
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might find it a paradox that the athletes are even part of a scheme devoted to education.

However, there are ways to make athletic achievements positive and to capitalize upon them so that the athletes themselves win a true place among their fellows, in the school and in the community. One of the best means is the letter club.

An actual example of the revolutionary change wrought by a letter club may be found in a metropolitan high school, which shall be called Jefferson High School. The school was located in an average residential area populated by professional and business families; it offered academic and commercial courses of senior high school level; and it was not marked by snobbery. Yet, one year the 22 boys who had earned letters in sports were decidedly out of it in every respect: schoolmates looked down on them (even though a few were members of the National Honor Society); teachers lacked confidence in them (going so far as to urge abandonment of athletics); and the players despised everybody. They were able to win only a few games and were becoming prob-

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Iems in behavior. Only a dramatic change could improve relationships.

Probably no individual who was involved in the stagnation of athletics at Jefferson High School could have inspired the desperately needed rejuvenation. A new personality, unhampered by the frustrations of the past, might administer the shot in the arm. Fortunately, the individual appeared in the person of the newly assigned teacher of health and physical education — a man who had had successful experience in another high school with a brilliant record in athletics and group relationships.

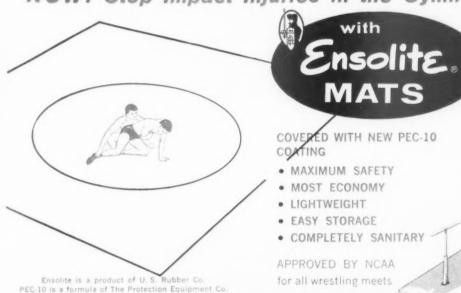
Soon after entering upon his duties as teacher and football coach, Mr. Tyler (as we shall call him) realized that his obligation extended far beyond teaching and coaching. He realized also that the boys who had won letters without bonor held the key to the locked door. Mr. Tyler determined to undertake an indirect guidance program centering upon that group, a program which would produce some positive achievements and, in turn, influence favorably the opinions and attitudes of the student body and the faculty, ultimately spreading

in ever-widening circles to the general public. Above all, although speed was imperative, the program must arise from the boys themselves as a genuine outgrowth of a permanent change of heart.

Having known the constructive possibilities of the letter club, Mr. Tyler settled upon it as the channel through which to direct the boys toward selfrespect and public esteem. There were, of course, preliminary obstacles to overcome. Winning the consent of the physical education department was easy enough, but extracting permission from the principal was difficult; yet this too was forthcoming after a long conference with administrative heads, who at first feared exaggerated stress on sports but eventually succumbed to reports of other schools which had derived much from such clubs. Nevertheless a degree of doubt remained, so the permission carried the provision that Mr. Tyler accept full responsibility for the venture. The next step was conversion of the unfriendly faculty, which stoutly opposed the club but finally concluded, that nothing could be worse than the present attitude and behav-

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ior of the athletes, and conceded.

It was now time to plant a seed which might seem to sprout spontaneously among the boys themselves. Mr. Tyler gave the captain of the football team a program of activities arranged by the letter club of another high school. The captain's eyes bulged when he glimpsed the first activity, a football dinner, and he asked to take the program home. Evidently he passed it around among the members of the team, for they were commenting upon the club all day. Needless to say, there was ready acceptance when three Jefferson letter winners were invited (by arrangement) to a meeting of the letter club which they had heard about. Enthusiasm grew. A self-appointed committee visited Mr. Tyler at his home, to ask for additional information on establishing a letter club, which they expected the administration to oppose vigorously. He told them to solicit opinions from the balance of the letter winners and, if they all agreed, to address a petition to the principal. This they did without delay and, to their surprise, permission came equally fast. The tide had turned.

Events followed in rapid succession which culminated in an organization; the committee called all letter winners for a meeting and meanwhile studied sample constitutions and pondered a program; 21 of the 22 letter winners attended the first gathering (scheduled 45 minutes before the opening of school one morning and hence already a deterrent to tardiness). At a second meeting they adopted a constitution and decided to sponsor a football banquet at the close of the season.

Their constitution contained, besides the usual details of organizations and a provision for alumni participation, a number of laudable purposes which reflected a desirable group attitude:

To develop and further interscholastic athletics.

To create better school spirit.

To create an attitude of real sportsmanship.

To develop a better understanding of athletics by the faculty.

To sponsor athletic programs, rallies, and contests.

To assist the coaches in handling athletic teams.

The boys lost no time in carrying out these aims, directing first, however, all effort toward the football banquet, an event unheard of in the history of the school. The boys financed this function by means of the

alumni-varsity football game, and managed the entire affair, to which they invited 125 persons, including 24 guests, the squad, and their parents. The speaker of the evening, president of the Chamber of Commerce and an alumnus, was a symbol of prestige; but perhaps a greater moment was when the principal commended the club members for their contributions to the life of the school.

During the next two years, their interest increased, and their achievements within that short space of time show that the boys were becoming an organic part of school life. Their program included the following:

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Two basketball banquets. Two football banquets.

Two alumni-varsity football games. Two faculty-varsity basketball games.

Three school dances.

A booth in the all-school carnival. Awarding of a trophy to an outstanding track man.

Adopting a standard school sweater.

Two club picnics.

Managing sale of uniform gym suits

Awarding an annual trophy to the top graduate of a nearby junior high school.

(Continued on page 52)





The Coiled **Spring** Racing Dive

Illustration 1 shows a good toe grip for the coil. The swimmer's legs are bent until power is felt, his back is rounded, his head is dropped, his arms are folded in with his thumbs locked, and his elbows are out. The arms must not touch tne body.

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By ALTON SMITH

Swimming Coach, The Fieldston School, New York, New York

N teaching beginners the funda-mentals of a good racing dive, swimming coaches are likely to run into difficulties. These, we believe, are most often due to one or two common problems.

The beginning swimmer, who is trying to improve his time for the 50-yard or 100-yard freestyle, is likely to overlook the importance of a good start. He fails to understand that the advantage to be gained from a well-executed racing dive may be the crucial factor in a sprint race, where decisions often rest on fractional differences of hand touches at the finish.

This advantage is based not on swimming ability, but on power and its correct application. The winner of a sprint race may not be the best swimmer, but he could be the boy who gains the greatest advantage with his racing dive.

LTON SMITH graduated from A Springfield where he captained the track team and was New England AAU 100-yard dash champion. He has coached at Fieldston School for five years. During that time he has seen his track team win four championships and his soccer team two championships of the private schools of metropolitan New York.

Even though a racer may appreciate the importance of his dive. he may still be apprehensive about reaching out and hitting the water. The tension produced often makes for poor body position in flight and in

entering the water.

To help overcome these major difficulties, we have developed a new basic type of dive which we call a coil start because it follows the dynamic, explosive action pattern of a coiled spring when it is released. The coil has proved to be a solid foundation on which to start a new swimmer, because from the very beginning he is able to feel with his own muscles the power and layout flight of the start.

The accompanying illustrations show an inexperienced beginner on his way to grasping the fundamentals of a racing dive. They are a record of this boy's fifth attempt at the coil start, and represent a typical example of how quickly a new swimmer can achieve good results by using this method.

Coaches who try this coil start with beginners will find that it offers two important advantages. It restricts the arm wind-up, which makes for better control, and develops a powerful forward thrust. It produces a plane of the correct angle over the water. A swimmer's locked thumbs create a plane for his hands which regulate the entry of the dive. The sprinter reaches out with his hands and

Illustration 2 shows the release the coil. The swimmer's back head have given a lift upward after his legs drive.

Illustration 3 reaching with l a spot on the shows the swimmer his hands and eyes for wall across the pool.







Illustration 4 shows the layout which is perfect. However, the backlift has been too powerful, causing the dive to rise a bit.

s balanced against the point ahead. n 5 shows a perfect the release of



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Illustration 6 shows the swimmer with his thumbs still locked. His hands act as a horizontal rudder to help control the entry,

eyes fixed on a spot on the opposite wall; therefore, he is more aware of his goal ahead and less concerned about the impact of the water beneath him. Fixing on a point also helps him to achieve better coordination, layout, and distance. By thus relieving the student of his apprehensions about hitting the water, the coil eliminates many of the bad habits that develop as a result of fear.

Use 15-yard time trials to check the efficiency of racing dives. With the coil technique, the swimmers will soon be enjoying congratulatory slaps on the back instead of those painful slaps on the stomach that are the reward of a beginner's usual ineptness.

Letter Club

(Continued from page 50)

But the peak of their efforts came when the boys conceived the notion of a memorial to school athletes lost in World War II. This memorial took the form of an electrically operated basketball scoreboard, a costly installation for which the club was wholly responsible. The boys indeed belonged now.

It is plain to see that the letter club has a great deal to offer. It is penicillin to the ailing sports program - and what is good for the sick one often makes the healthy ones even better. The club, emphasizing service, reminds all athletes that they have larger responsibilities than those of playing the game; that winning games is not half so important as winning individual and group respect; and that the admiration they desire must rest on good citizenship and an extra contribution to the general good. The club, while building morale in its members, also affects the onlookers; they learn that athletes can deserve more than tolerance or indulgence; and gradually they recognize athletic contributions to the wellbeing of the whole. The letter club is a channel into a solid future.

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NEW BOOKS

Football at Ohio State, written and published by Woody Hayes, 1711 Cardeff Rd., Columbus 21, Ohio. One hundred and eighty-one large-size pages. Price \$5.00. Publication date Sept. Received for review Dec. 16.

Here is a football book that is all football from the first page where the author starts out with this sentence: "Our offensive football is based upon the principle that we must first establish a sound running attack." From this opening sentence he moves right into a description of their stance, splits, and numbering system. Then he takes the reader right through the off-tackle belly play, with a paragraph devoted to the duties of each of the eleven players. The two ways of running the play against the Oklahoma defense are discussed as well as other defenses. Next, we have the fullback buck, followed by the inside counter, and that in turn by the off-tackle counter. Mind you, this is but one series of plays, and in like manner the author handles the outside belly. the split T series, the option, quarterback sneak, fullback counter, the fullback quick sweep, the power series, and the draw play.

Having presented the theory behind his offense and the plays which make up the offense, Hayes then takes up the drills which he uses and there are plenty — each one carefully explained as to purpose, operation, and

coaching points.

The passing game, training the quarterback, analysis of defenses, delense, the kicking game, scouting, statistics, organization and planning, athletic injuries, and the coach-player relationship are all discussed.

There is a tremendous amount of football savvy packed into the pages of this book and it is a valuable addition to the football literature of this country.

Modern Middle and Long Distance Running, by Jim Peters, Johnny Johnston, and Joseph Edmundson. Distributed by Sport Shelf, New York 33, N. Y. Price \$4.50. Publication date Nov. 13. Received for review Oct. 31.

The three authors are well-known British track specialists and they have prepared an interesting text on running events from 800 meters up to and including the marathon. They discuss each event from the point of



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strategy and training. In regard to the latter, the authors present a suggested four-week training program for each event for the first, second, and third years. In addition, they have included the training programs of some well-known English distance runners.

The Successful Camp, by Lewis C. Reimann. Published by The University of Michigan Press, Ann Arbor, Mich. Two hundred and thirty-three pages. Price \$4.75. Publication date Jan. 10, 1958. Received for review Dec. 16.

The author discusses virtually every aspect of camp administration from the selection of the site to the building of camper and staff morale. The book will provide the newcomer to the camping field with an excellent insight into camping. At the same time it will serve the experienced camp director as a valuable check list on administrative problems.

The Wow Boys, by Cyclone Corey, Published by Exposition Press, New York 16, N. Y. Two hundred and seventy-seven pages. Price \$4.75. Publication date Nov. 22. Received for review Nov. 18.

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This is a game-by-game account of the amazing Stanford team of 1940. There is not too much in the book from a technical standpoint. However, the book does have merit in that the play choice of the first T formation team is recounted.

The Game's the Same, by Sir John Smyth. Published by Philosophical Library, New York 16, N.Y. One hundred and four pages. Price \$4.75. Received for review Sept. 30.

Basically, the book concerns itself with tennis; however, throughout its pages the author has repeatedly pointed out the similarity between tennis and other sports. He has also done an admirable job of comparing the various games of leading male and female tennis players, past and present.

Jean Borota wrote the preface and seemed to sum up the entire book



For further information see Buyers Guide, page 72

COLOR has become an important part of our athletic picture, and in the filming of games the contrast of colors in numerals and uniforms for identification purposes is a most important and generally accepted procedure. To aid the coach in visualizing various color combinations, Wilson Sporting Goods Company has prepared three outline feotball figures, each on 8½" x 11" paper. With the use of colored pencils or crayons, various color combinations can be worked out. Also available are five basketball figures. Free by using the Service Coupon.





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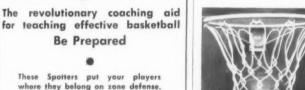




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where they belong on zone defense, out-of-bounds plays, breaks against a press, tip-offs, continuity, and many other situations. The Spotters are rubber circular mats 18 inches in diameter and are numbered 1, 2, 3, 4, and 5. Each of the five Spotters is of a different color.

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NE of the nicest means of making money for your high school booster club is this brochure. The brochure is printed on a fine-grained paper and includes a squad picture with names of the players, a list of outstanding achievements, and awards for certain players such as captain, most valuable player, etc., and a complete schedule with all scores included. In addition, these make a nice gift to members of the squad. They are priced most reasonably. The price for the first 50 copies is \$12.50 and each additional 50 cost \$2.50. Athletic Enterprises, 727 Winter Ave., Big Rapids, Mich.

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when he said: "Being a player of many games myself, I have always been struck by the fact that the basic principles for success at most games and sports are the same. And if we can only master those basic principles we are on the high road to success."

Fun in the Rough, edited by Howard Gill. Published by Prentice-Hall, Inc., Englewood Cliffs, N. J. One hundred and eighteen pages. Price \$2.95. Publication date Oct. 17. Received for review Oct. 7.

The book represents a collection of the best cartoons, best humorous golf stories, and best limericks culled from the pages of Golf Digest. In addition, the famous "Gallico Rules of Golf" by Paul Gallico are included.

Hurdles

(Continued from page 28)

must be whipped forward into a full running stride. If the first stride after the hurdle is shorter than the average of the three strides between hurdles, difficulty will often be encountered. The hurdler must drive the total distance of the race. He must drive to the first hurdle, drive over the hurdles, and drive between the hurdles.

The Work Schedule

Since speed is an important factor in high hurdling, a considerable amount of sprint work must be included in the work program. In addition to speed, the hurdler must be very flexible and have excellent rhythm and coordination. Therefore, he must include in his practice periods a variety of stretching exercises and a tremendous amount of work on hurdling form. Practice on starts and the step pattern to the first hurdle are also important.

When he is working on hurdling action, the runner ought to take five

LAYNE JENSEN had an outstanding record as a competitor in both high school and college hurdling. He set the Utah State High School record in the 120 highs and was Skyline Conference champion while at the University of Utah. In 1954 and 1955 he coached the Camp Pendleton team to the marine corps championship. The latter year he was selected as head coach for the all-Marine Corps Team. During 1956 he was assistant track coach at his alma steps allow t hetwee by con tion. an out dler is

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high I Spri for Jai steps between hurdles. These steps allow the athlete to cover the interval between hurdles with ease and thereby concentrate on correct hurdling action. A work schedule followed by an outstanding high school high hurdler is as follows:

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Early-Season Work Schedule

Monday, Warm-up, Jog 880 yards. Walk three 440's.

Tuesday. Warm-up. Four 440's at 60 seconds each with a short interval

Wednesday, Repeat Monday's work-

Thursday. Repeat Tuesday's work-

Friday. Warm-up. Two fast 1320 yard runs with a 15-minute interval between.

Mid-Season Work Schedule

Monday. Warm-up. Thirty minutes of work on the high and low hurdles. One 330-yard run near full speed. A short period of easy jogging, calisthenics, and walking to taper off.

Tuesday. Warm-up. Twenty minutes of starting practice. Two 220-yard sprints at 23 seconds each with a short interval between.

Wednesday. Repeat Monday's work-

Thursday. Repeat Tuesday's workout.

Friday. No workout. Saturday. Competition.

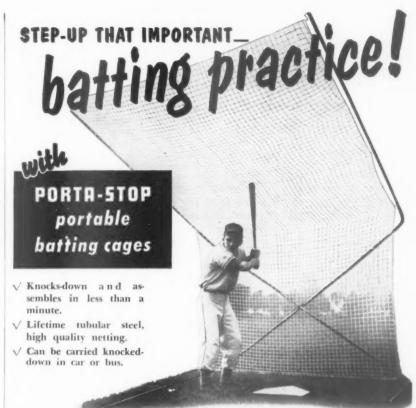
180-Yard Low Hurdles

This discussion is organized the same as the discussion of the 120-yard high hurdles.

The Start. The start in the low hurdles presents the same problem as does the start in the high hurdles. The only difference is that the low hurdler need not reach an erect running position as quickly as does the high hurdler, because the first low hurdle is 20 yards from the start, five yards farther than the first high hurdle.

Hurdling Action. The hurdling action in clearing a low hurdle is basically the same as that used in clearing a high hurdle. In the low hurdles, slightly less ground is covered while going over the hurdle, less forward lean is used, the hurdle is taken more quickly, and the hurdling action is less accentuated. A low hurdle, since it is taken more quickly and with less accentuation of action, interferes less with running rhythm than does a high hurdle.

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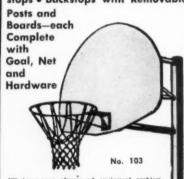
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are eight hurdles spaced 20 yards apart in a high school low hurdle race. This large interval (20 yards) makes the sprint between hurdles the most important phase of the race. An outstanding low hurdler must be a fast sprinter.

Seven strides are taken between the low hurdles, and the barrier is cleared on the eighth stride. If the runner covers 101/2 feet in clearing the hurdle. he must cover 49½ feet in the seven strides between the hurdles, an average of approximately seven feet, one inch per stride. Running with a sevenfoot stride at full speed is difficult and in many cases impossible for high school boys.

The same method of aiding the boys in developing a correct and consistent step pattern can be used in the low hurdles as is used in the high hurdles. Place an obvious marker where the foot should strike the ground on each stride. The important thing for the beginning hurdler is to run a correct step pattern regardless of the speed he is able to travel. As he practices and develops, the seven-foot stride will become easier for him and eventually he will find himself running with that length stride even when he runs flat sprints. As the runner becomes older and grows taller, he may even have to chop his stride some in order to run

the correct step pattern. The Work Schedule. The essentials of the work program for a low hurdler are: a variety of stretching exercises, a great amount of sprint training, work on hurdling form (use nine or 11 steps between hurdles when working on form), practice on starts and the step pattern to the first hurcile, and timed hurdle races (usually shorter or longer than 180 yards). Following is a basic work schedule of an outstanding high school hurdler:

Early-Season Work Schedule

Monday. Warm-up. Work on hurdling form (over three to five hurdles). Twenty starts.

Tuesday. Warm-up. Ten starts. Five Three 100-yard 50-yard sprints. sprints. Twenty minutes of work on hurdles.

Wednesday. Warm-up. starts. One 330-yard run at threequarter effort. Thirty minutes of work on hurdles. Four 110-yard sprints.

Thursday. Warm-up. Run the following races for time: one 50-yard dash, one 100-yard dash, two 70-yard high hurdles (five hurdles), and two 100-yard low hurdles (four hurdles).

Friday. Warm-up. Check form over the hurdle. Several easy starts.

THE ATHLETIC JOURNAL

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(Continued from page 45)

type of evaluation which is most conspicuous by its absence in literature in junior high school physical education.

A new tentative point chart was established by revising the one used in the spring, in the light of actual performances. Points were awarded statistically, in such a way that more points were awarded for improvement in performance, because it is more difficult to make a startling improvement in time, distance or height, if the initial performance is already outstanding. As the charts are now organized, the greater gain in points comes at the upper level of performance.

Tentative plans call for several junior high schools in our area to test these standards next spring, as they now stand, and then to determine how well the charts reflect the performances of their boys. Then the charts should be altered, if it seems advisable, in the light of the performances at several different schools.

However, the most stimulating use of this type of a program is not in determining who is the school's outstanding performer for each grade. It comes in watching the poorer boy find where he ranks in each event early in the track program; and then seeing his well-deserved pride of accomplishment as he slowly improves his performance week by week, even though his peak performance may be several hundred points below the better boys in the class. If the same standards were used for two years, it would then be easier to compare the rate of improvement for a boy's entire junior high school physical education

Gyms for July

(Continued from page 26)

can suggest other ways of providing a cool building without impairing its suitability for use during the winter. Whenever new construction is being planned, the coaches and physical education teachers should make certain that the specifications given to the architect require a building suitable for year-round use. When the blueprints are submitted for approval, the coaches and physical education instructors should see that adequate ventilation is provided for even the hottest weather.



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New Shot Putters

(Continued from page 43)

maintains its position during the hop. his right leg pushes him forward, and it is aided by the momentum which is gained from a lateral kick of the left, or front leg. When the glide is completed, the putter's body is again poised in the same position it was at the rear of the circle, but not for long. His feet are on the ground again, but his trunk is still moving forward. As the putter's body goes forward and moves over his rear leg, three movements are initiated: the thrust by the right leg against the ground; the twist of the shoulders and left elbow to the left; and the push of the shot with the right arm and fingers.

It is up to the athlete to learn the precise moment to begin these three motions, but in the beginning the coach can help him. A shout of now or some signal from the coach will aid in the learning process. Attention to the explosiveness and timing of these three motions is important. They must be started simultaneously and be of tremendous force.

While teaching newcomers the shot put, it may be wise to mention the details of the finger push, but do not stress the push unless it seems to be a fault with a particular boy. This finger push is the final force which is exerted upon the shot at the last moment. The fingers must be strong enough to give the shot a few extra inches. Attention to this effort, in detail, should come as the putter progresses.

Of course, there are phases in shot putting other than the actual event itself. On days when the boys are not throwing, they must build their strength by doing push-ups from the finger tips, chins, sit-ups, leg lifts, weight-lifting, and running. Quarter miles are excellent. As the boy learns, three days per week are enough to practice shot putting. The other days should be devoted to exercising and running.

This event is one of the most difficult to learn, and one of the hardest to teach. Watch the boys very carefully, and correct every fault before it becomes a bad habit. By encouraging competition, discouraging overpractice, and using all the skill at his command, a coach will develop good shot putters. Dear

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Home Visits

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In order that you, as a parent or guardian, may become better acquainted with the New Britain Senior High School interscholastic athletic program which involves: 1. an interpretation of the philosophy and objectives of physical education; 2. the health aspects; 3, the academic requirements; 4. the training regulations: 5. the teacher-student relationships; and 6. the wisdom of your son's participation in athletics; we are suggesting that you consider a home visit by the head coach of

who is also a teacher, on both a social and professional level. We sincerely hope that you will take advantage of this opportunity to bring the parent and son closer together in their understanding of the public school philosophy and program, especially as it relates to interscholastic athletics.

Within a few days I will contact you to make arrangements for a visit to your home.

Sincerely,

Head Coach of

Approved: Principal of Senior High School; Director of Physical Education and Athetics

Telephone Call and Consultation With Student-Athlete

Shortly after the letter has been mailed, the coach makes a telephone call to the parent or guardian and completes final arrangements for the time and date of the meeting at home. He asks that all parties be present — mother, father, and son. In addition, the coach also informs the student-athlete at school, and requests his presence at the professional and social visit. Unless all parties are present, the home visit

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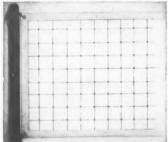
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School				
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City		Zone	Sto	ate

may not have beneficial results. Coaches should never forget to let the student-athlete know the reason why he is visiting the parents. Simply stated, the purpose is to give the parent a broad and clear view of the total interscholastic athletic program and its educational value. If the boys know it is going to be a pleasant visit, cooperation and motivation result.

Collection of Materials

From the guidance department the coach secures a copy of the academic requirements, guidance services, and data on teacher-student relationships. He receives a copy of the total curriculum which outlines the courses of study available from the principal. From the director of physical education and athletics he receives a copy of the Guidebook for Athletics which gives all facets of the total physical education program, philosophy and objectives, control and conduct regulations, training regulations, health aspects, etc. This material is used at the meeting with the parents and son, and, if necessary, copies for the parents are provided upon request.

Home Visit

The coach should plan to meet with the parents an hour after they have had their dinner. After the usual greeting, the coach should take up the professional and social parts of the education program. The professional aspects should deal with an explanation and outline of all phases of the interscholastic athletic program and the place it holds in the total program. In order to make his points clear, the coach's outline should be brief and devoid of educational jargon. The parent should be given every opportunity to ask questions while the coach jots down important suggestions and problems which need to be clarified. If these points of discussion are not cleared up at the home visit, the parents may visit the school and meet the principal, guidance head or teachers. As one parent told us: Why I never realized the schools did the things you have described. Now I know what they are trying to do for my son. The social part of the meeting usually consists of talk about the family, community, and hobbies. Controversial subjects such

as politics should be avoided. Refresh. ments should be accepted in a gracious manner and the visit terminated within an hour and a half.

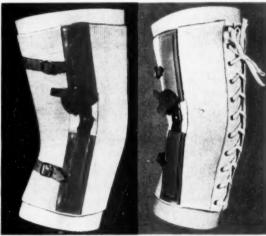
Follow-Up

The coach should study his notes and follow up his findings. In many instances a meeting with the principal, guidance head, teachers, director of physical education and athletics. and another visit to the home may be necessary. The kind of good will that promotes a better relationship between the school and the home has come from well-informed parents. Instead of meddling and apathy, we have encountered parents who are anxious to cooperate with the principal, the coach, and the teachers. This family approach - the home visit - may bridge the gap between superficial publicity and the relationships that influence the prejudices and complexes which parents hold toward the schools. In effect, the home visit becomes a cooperative endeavor between the parents and the coach on mutual problems and interests.









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(Continued from page16)

break and tricky maneuvers. Standing farther away from the plate often helps a batter hit this pitch more effectively. The ball should be watched longer, and every effort should be made to hit it to the opposite field. This maneuver tends to make the batter follow the approaching pitch longer.

The palm ball is an arching pitch which approaches the plate on its downward arch. This type of pitch should be hit toward right field or center field, depending upon the speed with which it is thrown.

Most other types of change-of-pace pitches can be hit successfully if good bat control is practiced by keeping the bat back on the stride, and by trying to hit this type of pitch to the opposite field.

High School Track

(Continued from page 38)

have continued this practice each year and present the averages for the first five years, the second five years, last year, and this year.

'47	-'51	'52-'56	1957	1958
Pacific30	0.8	36.5	37.3	43.3
Middle Atlantic13	5.6	19.7	10.9	23.3
West So. Central14	1.9	26.2	17.0	16.7
East No. Central 24	1.5	13.7	21.8	11.2
South Atlantic	1.5	1.4	0.5	4.5
West No. Central	3.5	5.3	9.6	4.1
Mountain	2.7	3.0	3.2	3.7
New England	3.4	2.6	3.7	3.2
East So. Central	0.7	0.8	0.0	0.0

The South Atlantic section showed a remarkable improvement, moving up to fifth place. In the previous eleven studies, the South Atlantic section placed seventh on two occasions and the balance of the time was either eighth or ninth. The previous high point average for this section was 3.5 as recorded in 1949.

Although four sections of the country dominate the high school track picture, it is worthy of note that the other five sections are making in roads. During the first five-year period, the four leading sections accounted for 85 per cent of the total points. In the next five-year period, this figure had climbed to 88 per cent. Last year the same four sections accounted for 83.6 per cent of the total points, while this year the figure was reduced a substantial margin to 74.4 per cent.

Performances

High school track performances



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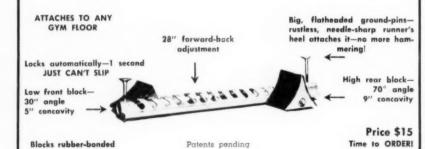
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- 1. Send runners out, down the track instead of out and up!"
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- 3. Make available a lifetime block within range of smallest budget.

Already leading coaches have said "This is it!"



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continue to improve at an almost unbelievable rate. This year the average winning performance exceeded the average winning performance for the years 1956 and 1957 in four of the nine running events, and four of the five field events. The fifth field event, the high jump, was identical with the previous two-year average. Thus, in nine out of fourteen events, the average winning performance was better than or equal to the average winning performance for the two previous years.

In comparison with the previous ten-year average, the current performances were better in all events. Improvement continues to be the best in the field events. The following table shows the average for the first ten years, the average for the next two years, and the average winning performance for this study.

Event	10 Years	'56-'57	1000
			1958
120 H. H.	15.28	15.06	15.11
100	10.17	10.10	10.05
Mile	4:38.11	4:35.54	4:35.77
880 Ry.	1:33.64	1:32.67	1:32.18
440-Yd.		50.76	50.63
880Yd.	2:02.20	2:02.52	2:01.40
180-Yd. L. H.*		20.16	20.18
220-Yd.	22.50	22.24	22.21
Mile Ry. **	t des a set	3:29.81	3:30.14
Pole		11-8	12-0
Shot	49-6	52-8	53-7
H. J.	5-10	6 - 01/2	6-01/2
Discus	142-81/2	151-61/2	152-0
B. J	21-5	21-83/4	21-9
*0.1.			

 Only recently has been recognized as the accepted distance for the low hurdle event.
 **Mile Relay included for the first time in 1956.

One hundred sixteen new state records were set, and this figure surpassed last year's mark of 115. The five field events accounted for 44 per cent of these new records, while 56 per cent of the new records were set in the nine running events. Idaho led the parade with seven new records, while Connecticut and Louisiana each wrote six new marks.

It is getting harder and harder to score a point, as will be noticed in the following table. The winning time for each event in 1947 is listed. In the next column the performances in this current study which equaled or excelled the best 1947 performance are given. As will be noted, points are awarded for the first six places. The third column of this table points up the number of states whose performances were equal to or better than the sixth place performance in the 1947 study. The last column shows the amount of improvement between the winning 1947 performance and the current one. In the 1947 study, the 220-yard dash was tied between four states, and two states tied

22.0. in the same Event 120 H 100-Ye Mile 880 R 440-Ye 880-Ye

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Event	1947	Winner	Sixth	ment
120 H. H.	14.5	6	14	.4
100-Yd.	9.9	13	35	.4
Mile	4:24.0	2	15	3.8
880 R	1:29.2	1	20	2.2
440-Yd.	49.3	7	19	1.4
880-Yd.	1:57.5	4	19	4.8
220-Yd	21.9	15	15	1.2
Pole	12-9	6	18	1.93/4
Shot	59-57/8	6	31	4-67 8
High	6.5	5	11	0-3 3/16
Discus	160-2	11	28	14-10
B. J.	22-93/4	5	17	1-61/4

National Honor Roll

In connection with this study, we present each year the National Honor Roll as selected by Bill Russell of the California Interscholastic Federation for the National Federation High School Track and Field Guide. Of the 149 listings on the Honor Roll, California accounts for 70. This figure almost equals the high total of 73 listings on the 1954 Honor Roll.

In the write-up two years ago, we pointed out that 87 per cent of the Honor Roll listings came from the states in the Middle Atlantic, East North Central, West South Central. and Pacific Coast regions. The figure is holding fairly steady at that level, being 86 per cent last year and 85 per cent in the current report. A total of 59 meritorious performances were made in state meets. The California Southern Section Semi-Final Meet accounted for 14 listings on the Honor Roll, while the Compton Cup led the school-sponsored meets with 6 listings. The Texas Relays and the Red Raider Relays each had five performances which warranted nation-wide recognition.

Baseball Drills

(Continued from page 19)

as the runner assumes his lead off second base. The pitcher should look back at the shortstop. If the shortstop feels the runner's lead-off is too big, he gives the signal. Then the pitcher turns his head back toward home plate and begins a count of one-two-three. At the count of nearly two, the shortstop breaks for second base, and at three, the pitcher whirls to second base. In throwing to second, the pitcher should be reminded that upon whirling around, he does not necessarily have to throw the ball. If the runner starts to move toward s tied third base, the pitcher should step



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Batting practice should be given top emphasis, since a properly supervised batting workout will contribute greatly to team performance. Hitting practice is too often underestimated by school teams.

The success of batting practice is dependent upon the pitcher. This player should be instructed to put the ball right over the middle of the plate, using three-quarter speed, so the batters can hit every pitch. A hard-throwing, wild pitcher can ruin the effectiveness of this drill. Timing is a major factor in hitting success. Consequently, the hitter tries to develop his timing in batting practice. His main concern should be perfecting his swing and getting good timing.

Each batter should be instructed to lay down two bunts and get four or five solid hits. The batter should run out his final hit. A new pitcher should be warming up constantly, and one should come in every fifteen minutes. No one should be idle, Every player should be hustling all the time; that is the best way to build up spirit on a baseball team.

If the players take their cuts and get out fast, the coach should try to go through the batting order twice, or even three times. The value of batting practice is tremendous, and baseball players need all the batting practice they can get.

Batting practice can be more effective when a batting cage is used. A portable batting cage simulates game conditions for the fielders, the batter, and the pitcher, but still permits the coach to stand behind the hitter and offer advice. A catcher equipped with paraphernalia should be included in this drill. Most coaches hit fungos to the infielders between pitches. When the pitcher finishes his turn on the mound, he should do his running and go to the showers.

A pitcher who keeps a runner close to first base will make it much harder for the base-runner to get into scoring position. The throwing to first drill involves the pitcher, first baseman, base-runner, and catcher. While waiting their turn, the whole pitching staff should stand near the mound.

With a runner leading off first base, the pitcher tries to determine whether he should pitch to the catcher or throw to first base. In this drill, the pitcher tries to perfect a good move to first base, although he should watch out for a possible balk. If the runner has a large enough lead, he uses the cross-over step and tries to steal second. The shortstop and sec-

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Use of the pitching machine can be most effective at the secondary school and college levels, mainly because good batting practice pitchers are at a premium. A robot pitcher can also save numerous sore arms early in the season. The aim of the pitching ma-chine can be adjusted to different areas in the strike zone, and the speed can be changed.

Many baseball games have been lost because a pitcher failed to cover first base. Pitchers should be instructed to go immediately toward first base on any ball hit to their left. If the pitcher finds that the first baseman can cover the bag, he should stop his run,

In this drill, the pitcher throws the ball to the catcher. The fungo hitter has another ball and hits it to the first baseman. Then the pitcher who threw the ball runs to take the throw at first base. He should run to a spot along the line, 10 feet from the base, and then run parallel to the line. It is important that he stay off the line and touch the base with his right foot. He should stop his run a few steps after touching the base and whirl around toward home plate, for a possible play at the plate.

The pitcher should field the ball at times, and the fungo hitter should also hit the ball to the first baseman's far right, thus bringing up the question of whether the second baseman or first baseman should field the ball. The throw to the pitcher should be completed a couple of steps before he arrives at the base. After catching the throw, he will then have time to find the base with his foot.

One of the most effective drills in baseball is the pepper game which is an excellent activity to use in preparing a team for practice. This drill involves a batter and two or three fielders. The coach should try to keep the number of players to a minimum, thus giving them a better workout. Here again, the effectiveness of this drill rests upon the shoulders of the hitter. He should be consistent and accurate in hitting the ball to the fielders.

The batting tee is an excellent mechanical aid and helps to eliminate fundamental weaknesses. It can be adjusted to different levels and placed on the inside or outside corner. However, the hitter must remember to keep the same position in the box and not change it according to the position of the tee.

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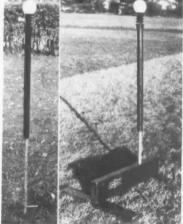
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ing leads and breaks on the part of the base-runner. The team can be divided into several groups of five or six, Each group forms a line, with the first player in each line taking a lead of about 12 feet from first base. On the signal from the coach, he breaks for second base, his first step being the cross-over step. After attaining full speed, the runner slows down and comes to the end of the line to await his turn.

The coach should assume a set position on the mound, and the players should take an imaginary lead. When the pitcher makes a move toward home, the players should break for second base, but if the pitcher makes a motion toward first base, the players hustle back.

Sliding is one of the most important skills in baseball and should not be neglected in the training program. A pit should be constructed about 10 feet square and one foot deep, and filled with sawdust. The team should line up about 40 feet away, and then one by one the players should run and slide into the pit. If a sliding pit is not available, have the boys take their shoes off and

practice form and technique on the soft grass.

FTER competing at Illinois, Don A Weiskopf played service baseball in Japan and then was with Oklahoma City of the Texas League. Arm trouble forced him to give up his baseball career and he returned to Illinois to obtain his master's degree. He was appointed to the staff of Idaho during the summer of 1956.

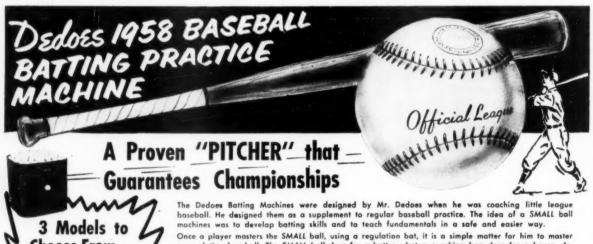
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